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OIL  
1962

STATE DOCUMENTS STATE DOCUMENTS

**OIL AND GAS CONSERVATION COMMISSION**  
**OF THE STATE OF MONTANA**

**TIM BABCOCK**  
GOVERNOR



**ANNUAL REVIEW FOR THE YEAR 1962**  
Relating To  
**OIL AND GAS**  
Volume 7

G. W. Yoder, Chairman  
Ted Hawley, Vice Chairman  
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# The Oil and Gas Conservation Commission of The State of Montana

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Northern District Field Office ..... 124 Main Street, Shelby  
Southern District Field and Tech. Office ..... 15 Poly Drive, Billings  
Sub-District Office ..... 216 East Main St., Sidney

## Annual Review for the Year 1962 Volume 7

### INTRODUCTION

Production for the year 1962 again reached an all time high. A total of 31,647,000 barrels were produced, with an average daily production of 86,700 barrels of oil per day. There were 419 wells drilled in the State during 1962, two more than were drilled in 1961. Ten discoveries were drilled out of a total of 164 wildcat wells. Of the 255 development wells drilled, 198 wells completed as oil or gas producers. Eastern Montana dominated the rest of the State in production and development drilling. Fallon County itself had 93 wells drilled in 1962.



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# FIVE YEAR SUMMARY

	1958	1959	1960	1961	1962
Production, Northern Montana—Bbls. ....	4,348,256	4,307,739	4,332,218	4,211,017	4,252,304
South Central—Bbls. ....	3,590,554	4,514,034	3,087,871	2,895,587	3,851,672
Central—Bbls. ....	3,201,003	4,515,489	5,780,420	6,367,524	5,279,163
Williston Basin—Bbls. ....	16,816,816	16,497,964	17,039,406	17,431,916	18,264,368
TOTAL .....	27,956,629	29,857,226	30,239,915	30,906,044	31,647,507
No. of Producing Wells, Northern Montana .....	3,120	3,067	2,811	2,447	2,615
South Central .....	102	100	96	81	88
Central .....	248	266	303	324	333
Williston Basin .....	446	455	497	535	656
TOTAL .....	3,916	3,888	3,707	3,387	3,692
Average Daily Production/Well—BOPD, .....					
Northern Montana .....	3.8	3.8	4.2	4.7	4.5
South Central .....	96.4	123.7	88.1	97.9	119.9
Central .....	35.4	46.5	52.3	53.8	43.4
Williston Basin .....	103.3	99.3	93.9	89.3	76.3
STATE AVERAGE .....	19.6	21.1	22.3	25.0	23.5
Development Wells Drilled, Oil Wells .....	159	156	114	169	182
Gas Wells .....	7	12	4	6	16
Dry Holes .....	46	71	58	60	57
TOTAL .....	212	239	176	235	255
Exploratory Wells Drilled, Oil Wells .....	12	7	14	7	8
Gas Wells .....	2	6	3	2	2
Dry Holes .....	109	101	150	173	154
TOTAL .....	123	114	167	182	164
TOTAL WELLS DRILLED .....	335	353	343	417	419
TOTAL FOOTAGE DRILLED .....	1,700,404	1,627,574	1,655,172	2,209,803	2,415,856
AVERAGE DEPTH ALL WELLS .....	5,106	4,611	4,811	5,299	5,765

# OIL AND GAS DISCOVERIES IN 1962

County	Field	Operator — Well Name and Location	Total Depth Ft.	Producing Formation (B/D) (MCF)	Initial Production Oil Gas (B/D) (MCF)
Dawson	Woodrow	Texaco, Condit 1, SW SW 8-16N-54E	9,934	Devonian (New Pay)	106
Liberty	Unnamed	Signal, Govt-McGregor 1, SW SW 18-37N-6E	3,345	Sawtooth	25
Musselshell	Unnamed	Cardinal, C. M. Hall 1, SW SW 6-10N-28E	3,905	Tyler	44
Roosevelt	East Benrud	Murphy, Tribal A-1, SE NW 36-31N-47E	7,804	Devonian	874
Rosebud	Bascom	Anschutz, Sibley 1, NW NW 11-10N-31E	4,850	Tyler	408
Rosebud	Musselshell	Sumatra, DeJaegher 2, SE NE 22-11N-31E	4,420	Tyler	342
Sheridan	Unnamed	Signal, Peterson 1, NE SE 19-35N-58E	7,205	Madison	42
Sheridan	Unnamed	Sun, Hellegaard 1, SE NE 8-37N-57E	10,438	Madison & Devonian	238
Teton	Unnamed	Texaco, Govt-Pearson 1, NW SW SW 26-27N-9W	6,830	Madison	250
Toole	West Whitlash	Sumatra, Parsell 1, SE SE NE 15-37N-3E	2,880	Swift	20,450



**SUMMARY OF DRILLING BY COUNTIES—1962**  
**STATE OF MONTANA**

COUNTY	WILDCATS			DEVELOPMENT			TOTAL WELLS DRILLED	FOOTAGE DRILLED	AVG. DEPTH PER WELL
	Dry	Oil	Gas	Dry	Oil	Gas			
Big Horn	6	---	---	---	2	---	8	33,470	4,184
Blaine	1	---	---	---	---	---	1	3,025	3,025
Carbon	12	---	---	---	1	1	14	52,102	3,721
Carter	11	---	---	---	---	---	11	61,114	5,556
Cascade	1	---	---	---	---	---	1	4,415	4,415
Custer	7	---	---	---	---	---	7	43,330	6,190
Daniels	1	---	---	---	---	---	1	9,800	9,800
Dawson	1	---	---	4	12	---	17	159,350	9,373
Fallon	2	---	---	5	80	6	93	779,625	8,383
Fergus	1	---	---	---	---	---	1	4,583	4,583
Garfield	5	---	---	---	---	---	5	25,890	5,178
Glacier	3	---	---	3	21	---	27	83,273	3,084
Golden Valley	1	---	---	---	---	---	1	3,298	3,298
Hill	1	---	---	---	---	---	1	4,002	4,002
Lewis & Clark	1	---	---	---	---	---	1	7,761	7,761
Liberty	2	1	---	---	10	4	17	50,613	2,977
McCone	5	---	---	2	4	---	11	96,793	8,799
Musselshell	11	1	---	19	12	---	43	184,092	4,281
Park	2	---	---	---	---	---	2	15,590	7,795
Petroleum	4	---	---	1	2	---	7	16,922	2,417
Phillips	2	---	---	---	---	---	2	7,805	3,903
Pondera	4	1	---	---	8	1	14	35,936	2,567
Powder River	10	---	---	---	---	---	10	77,269	7,727
Richland	2	---	---	---	3	---	5	47,899	9,579
Roosevelt	9	1	---	4	1	---	15	119,381	7,958
Rosebud	11	2	---	9	8	---	30	151,152	5,038
Sheridan	9	2	---	1	6	---	18	148,322	8,240
Stillwater	1	---	---	---	---	---	1	2,978	2,978
Teton	19	---	1	1	1	---	22	73,525	3,342
Sweetgrass	1	---	---	---	---	---	1	6,450	6,450
Toole	2	---	1	8	8	4	23	54,310	2,361
Valley	2	---	---	---	---	---	2	10,077	5,038
Wibaux	1	---	---	---	3	---	4	38,564	9,641
Yellowstone	3	---	---	---	---	---	3	3,140	1,046
TOTALS	154	8	2	57	182	16	419	2,415,856	5,765

**MONTANA**  
**GAS PRODUCTION DATA—1962**

Field	County	Producing Formation	1962 Production MCF
Bears Den	Liberty	Kootenai	45,252
Big Coulee	Golden Valley	Lakota-Morrison	952,801
Bowdoin	Phillips & Valley	Colorado	2,711,954
Bowes	Blaine	Eagle	1,031,821
Cabin Creek	Fallon	Siluro-Ordovician	1,012,056
Cedar Creek	Fallon & Wibaux	Judith River & Eagle	5,799,544
Cut Bank & Reagan	Glacier & Toole	Kootenai	8,618,812
Devon	Toole	Colorado	47,605
Dry Creek	Carbon	Cretaceous	1,956,381
Elk Basin	Carbon	Tensleep	320,733
Flat Coulee	Liberty	Kootenai	83,046
Golden Dome	Carbon	Eagle	72,296
Grandview	Liberty	Greenhorn	114,823
Hardin	Big Horn	Frontier	53,978
Keith Block	Liberty	Sawtooth-Madison	2,041,751
Kevin-Sunburst	Toole	Kootenai	916,687
Pine	Dawson, Prairie, Fallon, Wibaux	Siluro-Ordovician	758,692
Plevna	Fallon	Judith River	175,996
Utopia	Liberty	Sawtooth-Ellis	488,944
Whitlash	Liberty	Colorado	1,040,424
Miscellaneous			159,982
TOTAL ALL FIELDS.....			28,403,578

**REFINING**

	<u>Year 1962 Total Bbls.</u>
Big West Oil Company.....	855,080
Continental Oil Company.....	5,573,439
Diamond Asphalt Company.....	207,144
Farmers Union Central Exchange, Inc. ....	6,494,613
Humble Oil & Refining Company.....	12,027,731
Jet Fuel Refinery.....	91,724
Petrofuels Refining Company.....	372,517
Phillips Petroleum Company .....	1,436,308
Union Oil Company.....	1,090,704
TOTAL Bbls. Oil Refined in Montana (1962).....	28,149,260



**SUMMARY OF WATER DISPOSAL FACILITIES IN MONTANA**  
**1962**

Field	Operator	Disposal Formation	Average Depth	Date Commenced	Cumulative 1-1-63	Avg. Inj. Pressure—psi	Daily Avg. BWPD.
Cabin Creek	Shell	Dakota	3,950	6-12-58	7,531,597	---	6,521
Deer Creek	Texaco	Dakota	4,610	3- 3-57	787,318	296	402
Gas City	Shell	Judith River	2,710	6- 1-62	121,923	355	669
Glendive	Texaco	Dakota	4,250	3-25-56	1,234,477	1292	848
Little Beaver & Little Beaver East	Shell	Madison	6,779	8- 5-62	321,463	---	2,108
Outlook	Amerada	Dakota	4,082	1-12-60	1,276,910	700	1,584
Pennel	Shell	Red River	8,650	8- 5-61	386,578	1300	705
Pennel	Mobil	Madison	7,065	10-16-62	16,180	600	176
Pondera	Phillips	Madison	2,212	11- 2-56	4,105,932	Vacuum	1,241
East Poplar	Murphy	Dakota	4,000	9- 1-57	17,596,027	550	15,724
East Poplar	Polumbus	Judith River	850	9- 1-60	516,711	363	1,371
Richey	Texaco	Lakota	4,971	12- 9-61	225,680	508	564
Richey	Robinson	Dakota	4,900	12- 1-59	2,352,932	650	251
Sand Creek	Texaco	Swift	4,770	6-28-61	517,778	1037	869
Tule Creek	Murphy	Dakota	4,000	6-10-62	153,292	720	727

# SUMMARY OF ACTIVE SECONDARY RECOVERY PROJECTS STATE OF MONTANA (Data effective to January 1, 1963)

Field, Formation	Operator	Type of Project	Injection Pattern	Date Injections Commenced	Cumulative Injections 1000 S. Bbls. or MCF	Dec. 1962 Avg. Daily Injection Rate	Average Injection Pressure psi	Est. Life of Project Years	Est. Orig. Sec. Rec. Recoverable 1000's Bbls.	Source of Injection Media
Bowes, Sawtooth	Texaco	Waterflood	Pilot 5-Spot	5-23-61	413	693	12	14	5,000	Madison
Cabin Creek, Siluro-Ordovician	Shell	"	Pilot	6-12-59	1,844	1,000	360	19	19,000	Prod. Water & Fox Hills
Cat Creek, 1st & 2nd C.C. Unit I	Continental	"	Periphal	10-62	76	945	--	10	3,000	Third Cat Creek
Cat Creek, 1st & 2nd C.C. Unit II	Continental	"	Periphal	12-59	5,709	8,713	--	9	3,000	Third Cat Creek
Cut Bank, NW Unit, Cut Bank	Humble	"	5-Spot	1-30-62	584	1,621	1,850	14	2,800	Madison
SE Unit, Cut Bank	Texaco	"	5-Spot	4-18-62	840	3,389	1,860	14	5,700	Madison
SW Unit, Cut Bank	Phillips	"	5-Spot	9-11-62	281	2,480	175	14	18,000	Madison
Tribal, Lander	Humble	"	Dispersed	6-51	3,248	986	1,200	7	500	Eagle
McGuinness, Moulton	Union	"	Dispersed	12-21-62	1	102	--	5	500	Madison
Elk Basin, Frontier	Pan American	Gas Inj.	Crestal	1926	All injection wells in Wyoming			10	No Prim. est.	Purchased Gas
Embar-Tensleep	Pan American	"	Crestal	1949	All injection wells in Wyoming			50	No Prim. est.	Manufactured Inert Gas
Madison	Pan American	Waterflood	Periphal	1962	2,243	8,326	2,100	50	10,106	Madison & Clarks Fork River
Elk Basin, N.W., Frontier	Sinclair	"	Periphal	10-17-57	1,004	557	--	9	340	Madison
Kevin-Sunburst, Madison	Imperial Craig	"	Dispersed		744	348	--	Inconcl.	--	Madison
Kevin-Sunburst, Madison	Northwest Prod.	"	Pilot 5-Spot	1-23-61	429	693	750	Inconcl.	--	Madison
Pine, Siluro-Ordovician	Shell	"	Modified Periphal	3-10-59	4,832*	8,630*	1250 to 1650	24	14,800	Prod. Water & Fox Hills
Pondera, Madison	Phillips	"	One well pilot	8-22-61	186	365	Vacuum	Inconcl.	--	Madison
Poplar, Madison	Murphy	"	Periphal	9-56	8,770	2,545	350	Inconcl.	--	Madison produced water
Reagan, Madison	Union	Gas Inj.	Crestal	8-61	377*	1,306*	1,020	19	600	Produced Gas
Stensvad, Tyler	Pan American	Waterflood	Periphal	Pend. Unit appr.	--	--	--	10	4,110	Madison
TOTAL									87,456	

\* Date effective to 12-1-62.

B.O.P.D. (THOUSANDS)

# CRUDE OIL PRODUCTION 1942-1962

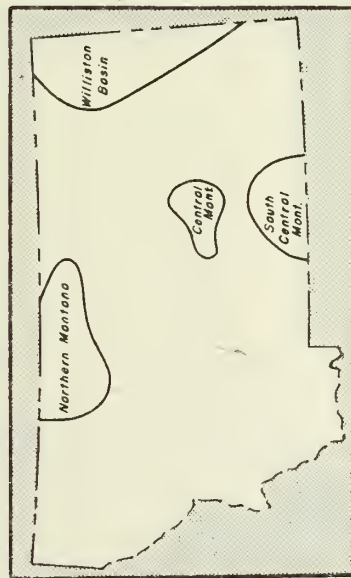
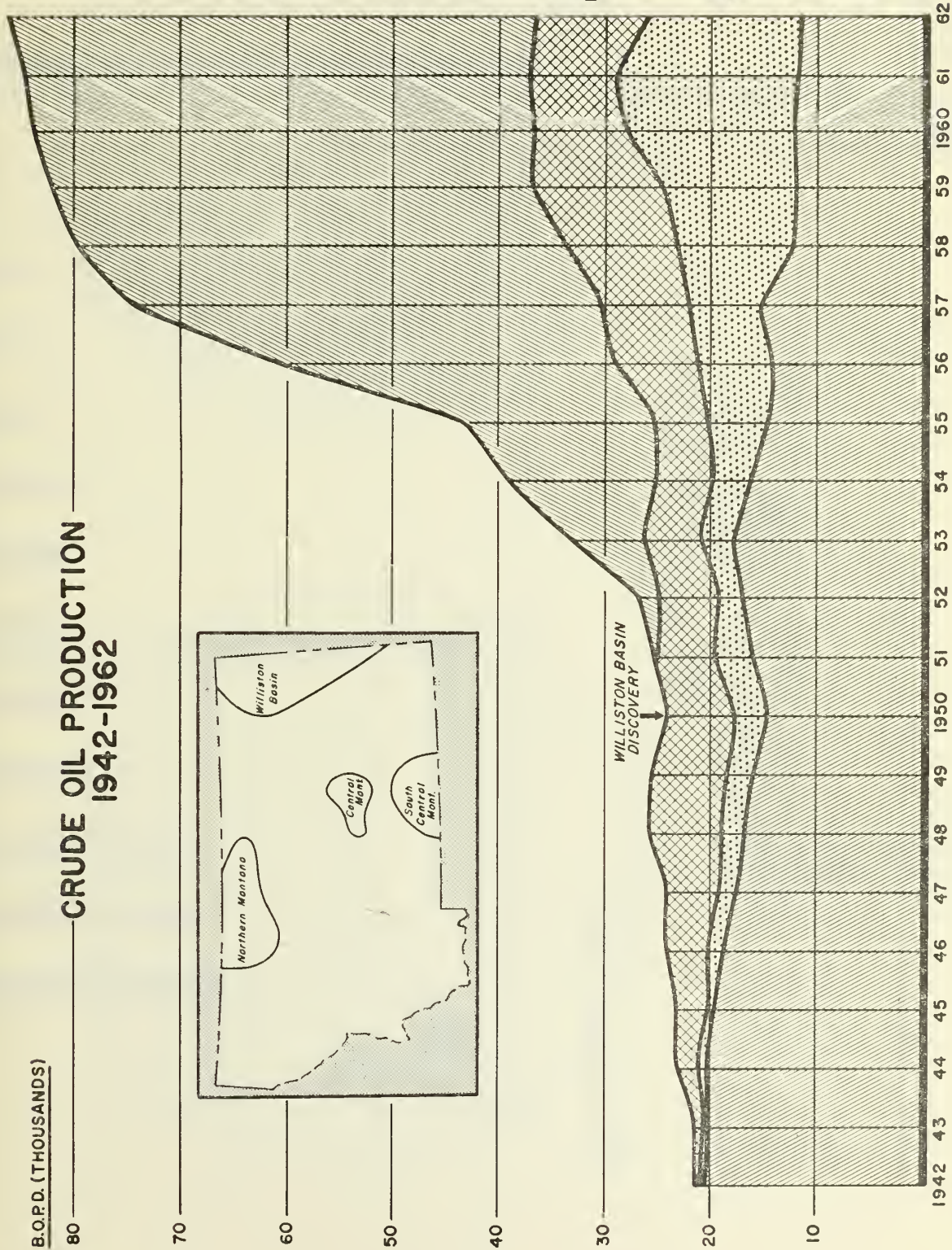
TOTAL  
86,705  
B.O.P.D.

1962  
PERCENT  
WILLISTON BASIN—57.7 %

SOUTH  
CENTRAL  
MONTANA  
12.2 %

CENTRAL  
MONTANA  
16.7 %

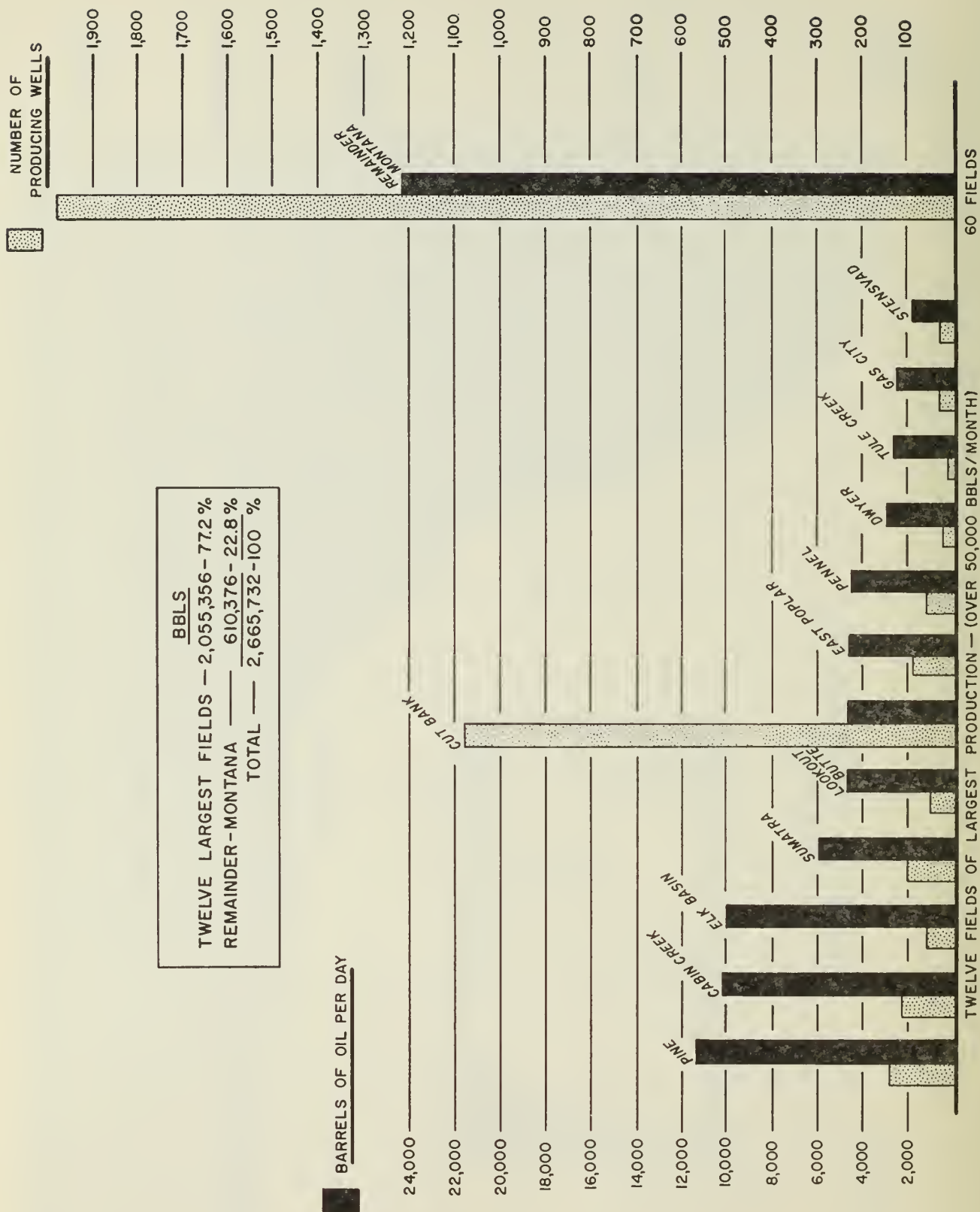
NORTHERN  
MONTANA  
13.4 %



WILLISTON BASIN  
DISCOVERY



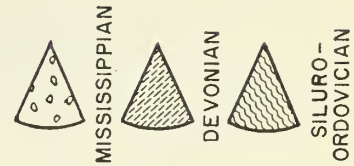
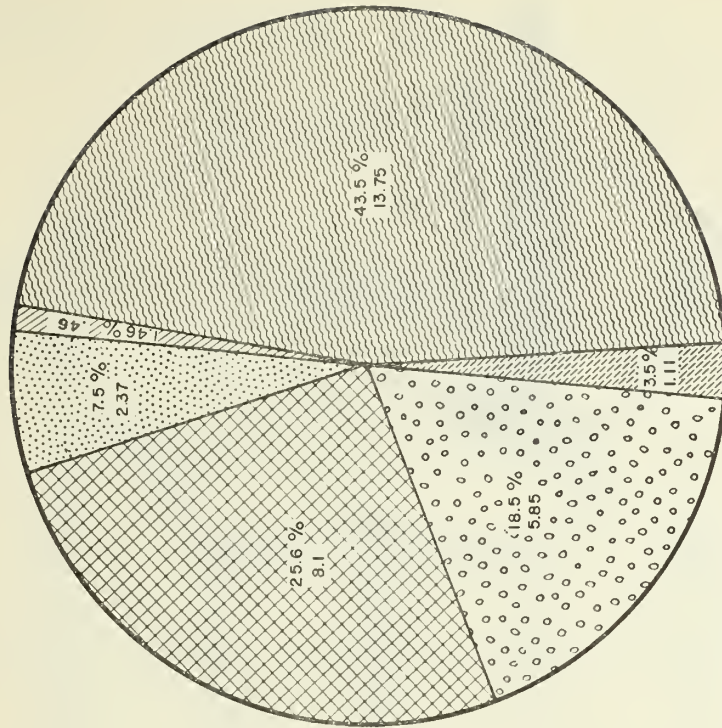
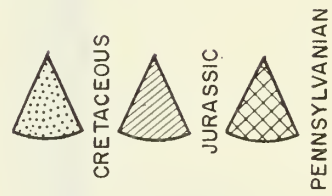
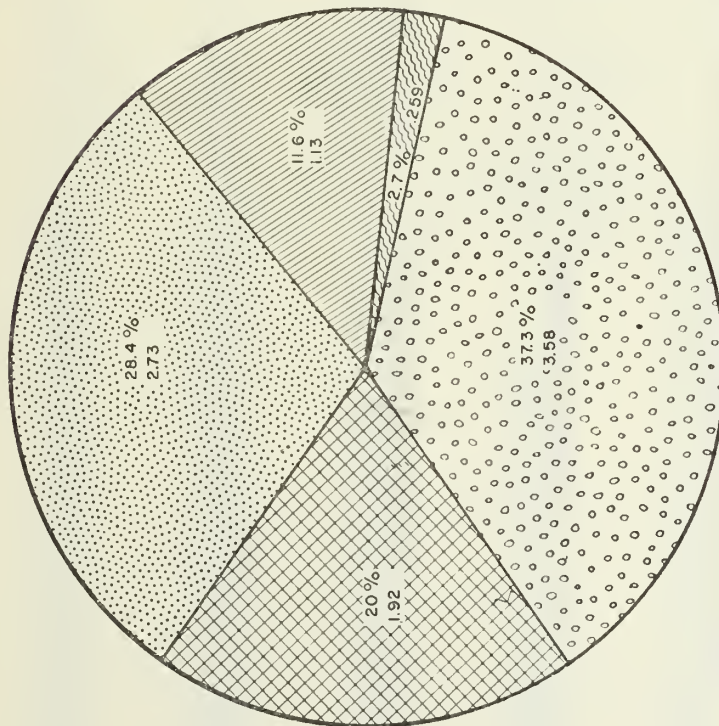
# CRUDE OIL PRODUCTION—MONTH OF DECEMBER, 1962



# PRODUCTION BY GEOLOGIC AGE

1952

1962



9.6 ——— TOTAL — MILLIONS OF BARRELS — 31.6

# NUMBER OF WELLS DRILLED

500

400

300

200

100

0

1956

1957

1958

1959

1960

1961

1962

DEVELOPMENT

EXPLORATORY

OIL

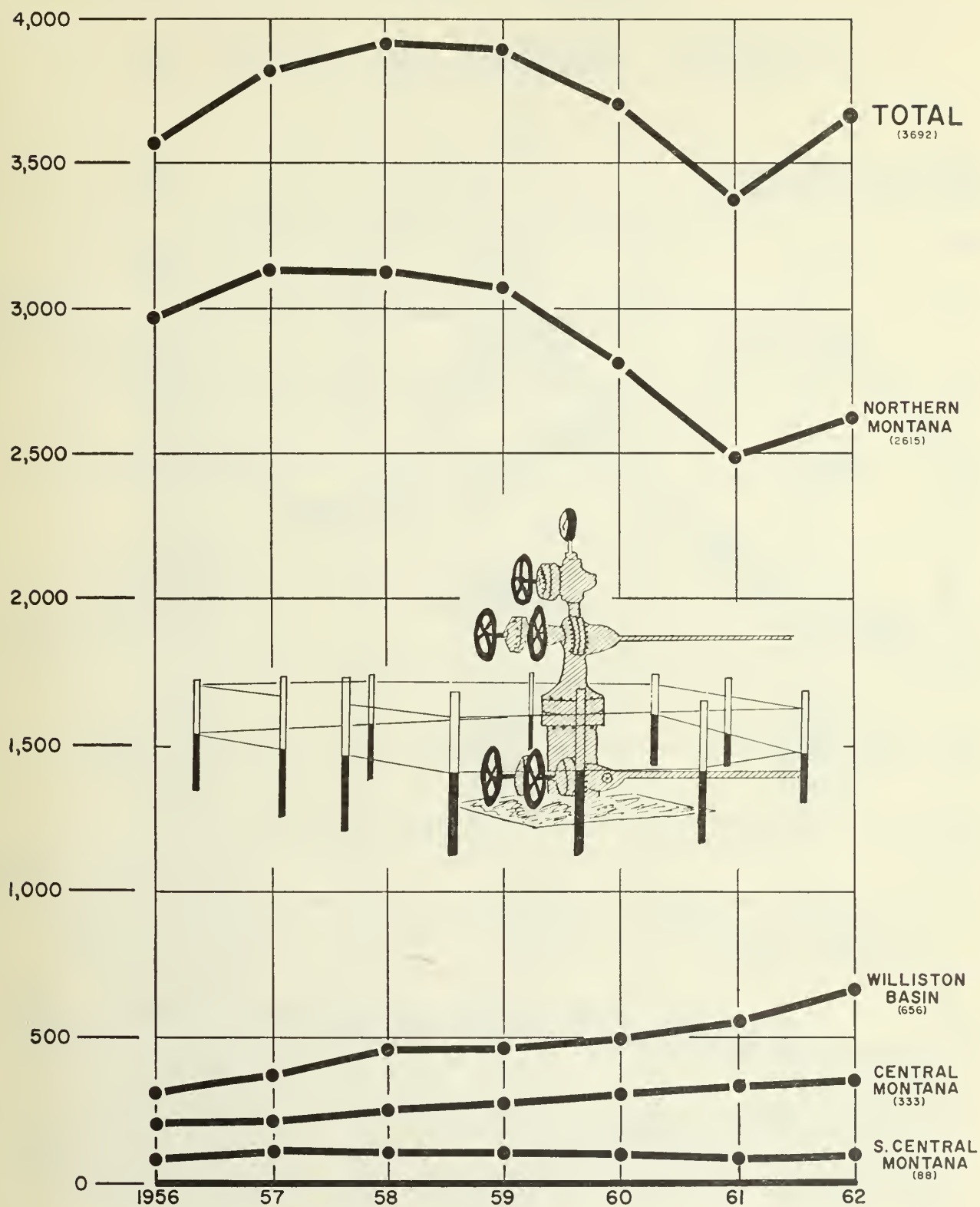
GAS

DRY HOLES



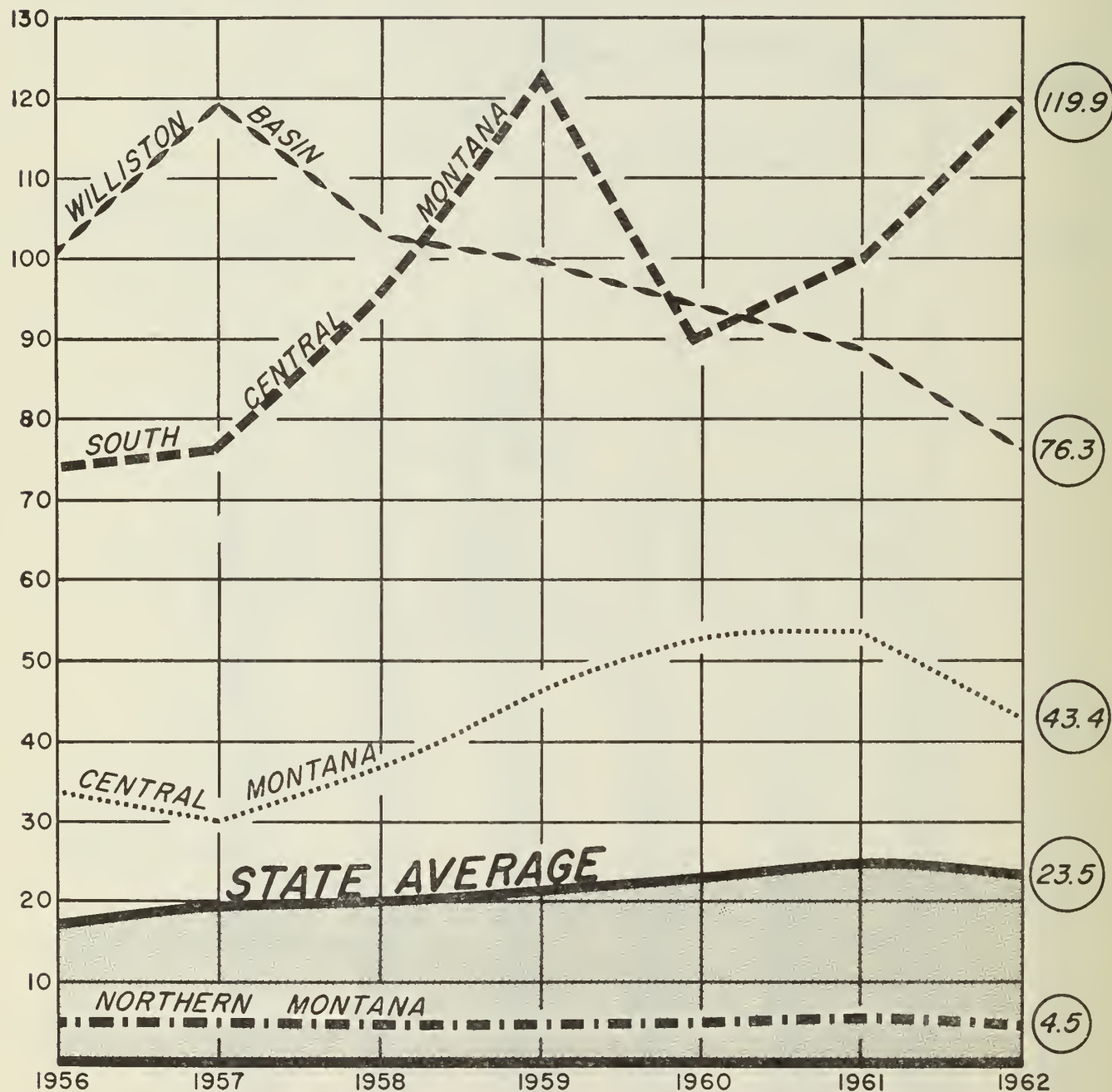


# NUMBER OF PRODUCING WELLS

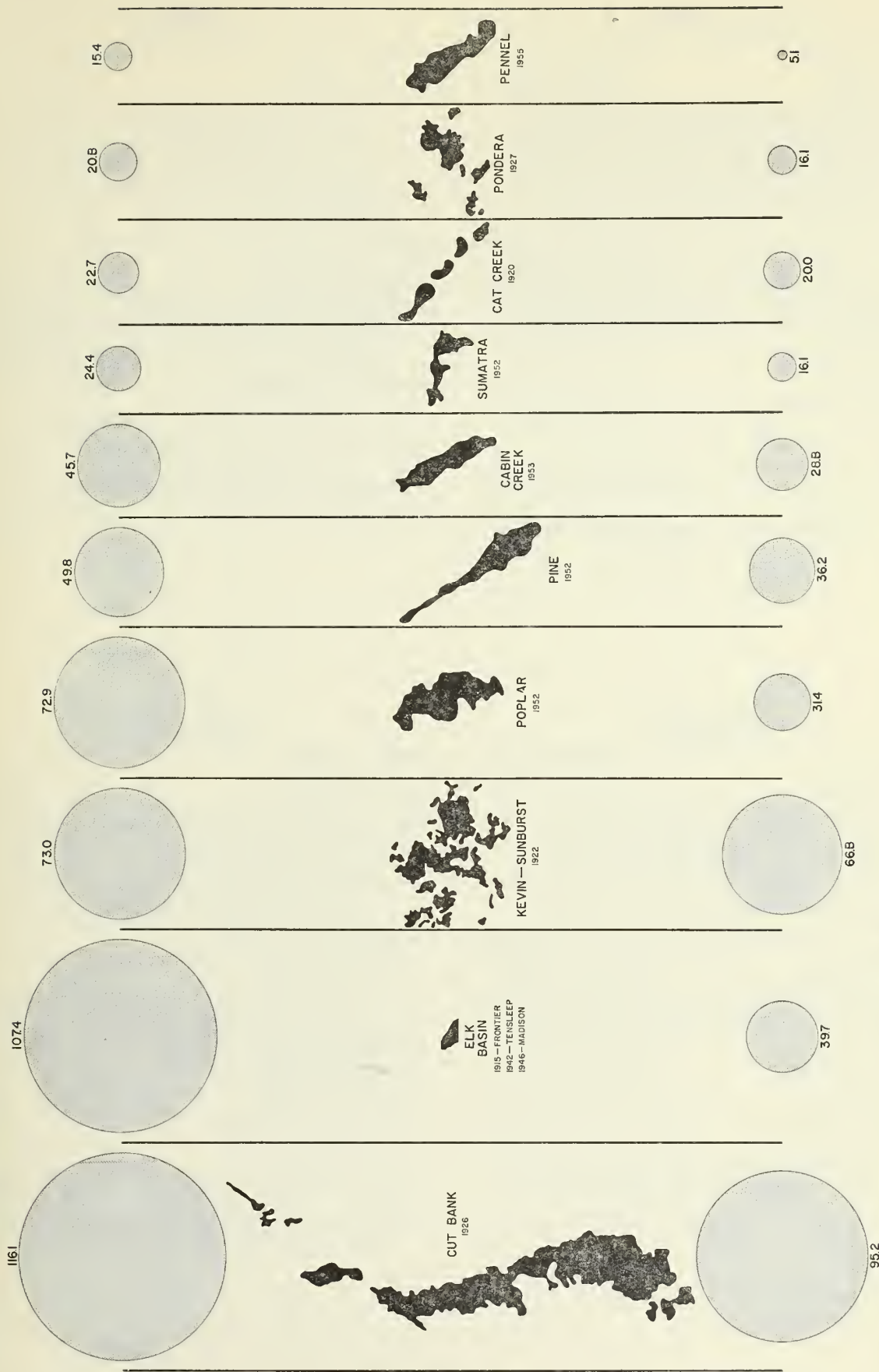


# — AVERAGE — DAILY PRODUCING RATE

**B.O.P.D. / WELL**



ORIGINAL PRIMARY RESERVES —



TEN TOP FIELDS — MILLIONS OF BARRELS

CUMULATIVE PRODUCTION —

## ASH CREEK

County: Big Horn

### Discovery Well:

Name: McDermott-Shell, Elsie Berry No. 1  
Location: NW SW Sec. 24, T. 58N., R. 85W., Sheridan County, Wyo.  
Date Completed: April 26, 1952  
Total Depth: 4799'  
Initial Potential: 180 BOPD, 20 BWPD

### Spacing Regulations:

330' from boundary of quarter-quarter section, and 1320' between wells. 75' tolerance for topographical conditions. The field boundaries are not delineated.

### Special Field Rules:

State-wide rules.

### No. Producing Wells: 4

Type of Trap: Anticline

Productive Formations: Shannon sandstone of Upper Cretaceous age.

Probable Drive Mechanism: Partial water drive and depletion drive.

## BANNATYNE

County: Teton

### Discovery Well:

Name: Genou Oil & Gas, Speer No. 1  
Location: NW NW Sec. 8, T. 25N., R. 1E.  
Date Completed: July 21, 1927  
Total Depth: 1580'  
Initial Potential: 30 BOPD

Deepest Well: Thomas Carney, Speer No. 2, T.D. 3115'

### Spacing Regulations:

Center of 10 acre tracts, 50' tolerance for topographic conditions, delineated by Commission Order No. 20-58.

### Special Field Rules:

State-wide rules.

### No. Producing Wells: 13

Type of Trap: Anticline

Productive Formations: Swift (Jurassic)

Probable Drive Mechanism: Water drive

### Secondary Recovery:

A waterflood secondary recovery project is approved for this field. The operator has not yet begun injections.

## BASCOM

County: Rosebud

### Discovery Well:

Name: Anschutz Oil, Sibley 1  
Location: NW NW Section 11, T. 10N., R. 31E.  
Date Completed: August 8, 1962  
Total Depth: 4850'  
Initial Potential: 408 BOPD

Deepest Well: Above well

### Spacing Regulations:

80-acre spacing, permitted well in Center of NW¼ and SE¼ of each quarter section, 200' topographic tolerance permitted. Temporary spacing expires September 13, 1963. Delineated by Order No. 52-62.

### No. Producing Wells: 1

Type of Trap: Structural and Stratigraphic

Productive Formations: Tyler

Probable Drive Mechanism: Depletion drive

## BEARS DEN

County: Liberty

### Discovery Well:

Name: Kenneth Frazier, Ritter-Govt. No. 1-X  
Location: SW SE Sec. 12, T. 36N., R. 5E.  
Completed: July 6, 1924  
Total Depth: 3290'  
Initial Potential: 5,000 MCFGPD

Deepest Well: Above well

### Spacing Regulations:

330' from boundary of quarter-quarter section, and 1320' between wells. Tolerance of 75' for topographic reasons. Field is not delineated.

### Special Field Rules:

State-wide rules.

### No. Producing Wells: 5

Type of Trap: Anticline

Productive Formations: Kootenai (Lower Cretaceous)

Probable Drive Mechanism: Depletion and gas cap drive.



## **BELFRY**

**County:** Carbon

### **Discovery Well:**

**Name:** Carter, Wheatley-Govt. No. 1  
**Location:** NW NW Sec. 7, T. 9S, R. 22E.  
**Date Completed:** March 22, 1958  
**Total Depth:** 12,185'  
**Initial Potential:** 196 BOPD, 1,121 MCFGPD

**Deepest Well:** Above well

### **Spacing Regulations:**

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons. Field not delineated.

### **Special Field Rules:**

State-wide rules.

**No. Producing Wells:** 1

**Type of Trap:** Stratigraphic

**Productive Formations:** Fuson (Lower Cretaceous)

**Probable Drive Mechanism:** Depletion and solution gas drive.

## **BENRUD**

**County:** Roosevelt

### **Discovery Well:**

**Name:** Cooperative Refinery Association, Listug-Olson "A" 1  
**Location:** NE SW Sec. 34, T. 31N., R. 47E.  
**Date Completed:** December 7, 1961  
**Total Depth:** 7620'  
**Initial Potential:** 498 BOPD, 16/64" ck., no water.

**Deepest Well:** Above well (Devonian)

### **Spacing Regulations:**

160-acre spacing units, permitted well to be no closer than 900' to any boundary of spacing unit. Field delineated by Order No. 44-62 and 2-63.

**Special Field Rules:** Semi-annual bottom hole pressure surveys required

**No. Producing Wells:** 1

**Type of Trap:** Structural

**Productive Formation:** Nisku (Devonian)

**Probable Drive Mechanism:** Water drive

## **BENRUD — EAST**

**County:** Roosevelt

### **Discovery Well:**

**Name:** Murphy Corp., Ft. Peck Tribal 1-A  
**Location:** SE NW Sec. 36, T. 31N., R. 47E.  
**Date Completed:** December 13, 1962  
**Total Depth:** 7804'  
**Initial Potential:** 503 BOPD

**Deepest Well:** Above well

### **Spacing Regulations:**

160-acre spacing, well to be no closer than 900' from any boundary at a quarter section. Field delineated by Order No. 2-63. Temporary order expires January 10, 1964.

### **Special Field Rules:**

Semi-annual bottom hole pressure surveys and quarterly well tests required

**No. Producing Wells:** 1

**Type of Trap:** Structural

**Productive Formations:** Nisku (Devonian)

**Probable Drive Mechanism:** Water drive

## **BIG COULEE**

**County:** Stillwater and Golden Valley

### **Discovery Well:**

**Name:** Northern Natural Gas, NP "B" 1  
**Location:** NW SE Sec. 31, T. 5N., R. 20E.  
**Date Completed:** September 19, 1954  
**Total Depth:** 2145'  
**Initial Potential:** 5,515 MCFGPD

**Deepest Well:** Above well (Cambrian)

### **Spacing Regulations:**

1320' from lease line, 3700' between wells, 75' tolerance for topographic reasons, not delineated.

### **Special Field Rules:**

State-wide rules.

**No. Producing Wells:** 4

**Type of Trap:** Anticline

**Productive Formations:** Lakota (Lower Cretaceous). Morrison (Jurassic)

**Probable Drive Mechanism:** Water drive

## BIG WALL

County: Musselshell

### Discovery Well:

Name: Texaco, NP No. 1

Location: SE NE NW Sec. 19, T. 10N., R. 27E.

Date Completed: July 1, 1948

Total Depth: 3139'

Initial Potential: 9 BOPD

**Deepest Well:** Texaco, Zoerb No. 1, Section 18, T. 10N., R. 27E. Kibbey (Mississippian). T.D. 3617'

### Spacing Regulations:

330' from lease line, 990' between wells, 75' tolerance for topographic reasons. Delineated by Order No. 12-54.

### Special Field Rules:

State-wide rules.

**No. Producing Wells:** 31

**Type of Trap:** Structural

**Productive Formations:** Amsden (Pennsylvanian); Tyler (Pennsylvanian)

**Probable Drive Mechanism:** Amsden, water drive; Tyler, depletion.

**Water Disposal:** The Tyler "A" sand has previously been used as a water disposal formation. Water injection was ceased on November 1, 1961 after approximately 3,200,000 barrels had been injected. Water is now being backflowed to relieve pressure in the Tyler "A" sand.

## BLACKFOOT

County: Glacier

### Discovery Well:

Name: Union Oil Co., Mmmtzing No. 1

Location: NE NW Sec. 11, T. 37N., R. 6W.

Date Completed: October, 1956

Total Depth: 3542'

Initial Potential: 15 BOPD

**Deepest Well:** Mobil, F-34-3-1. Madison (Mississippian). T.D. 3687'

### Spacing Regulations:

Center of 40 acres, 300' tolerance for topographic reasons, delineated by Order No. 3-57.

### Special Field Rules:

Dual completions permitted upon approval by Petroleum Engineer.

**No. Producing Wells:** 14

**Type of Trap:** Structural and stratigraphic

**Productive Formations:** Cut Bank Sand (Cretaceous); Madison (Mississippian)

**Probable Drive Mechanism:** Partial water drive and depletion drive

## BLACKLEAF CANYON

County: Teton

### Discovery Well:

Name: Northern Natural Gas, Blackleaf-Federal "A" No. 1

Location: NW SE NE Sec. 13, T. 26N., R. 9W.

Date Completed: May 22, 1958

Total Depth: 6323'

Initial Potential: 5,293 MCFGPD

**Deepest Well:** Above well

### Spacing Regulations:

1320' from lease line, 3700' between wells, 75' tolerance for topographic reasons; not delineated.

### Special Field Rules:

State-wide rules.

**No. Producing Wells:** Shut-in

**Type of Trap:** Fault block

**Productive Formation:** Madison (Mississippian)

**Probable Drive Mechanism:** Unknown

## BORDER

County: Toole

### Discovery Well:

Name: Vanalta Oil Co., Ltd. No. 1

Location: L.S.D. 3, Sec. 4, T. 1N., R. 16W., Alberta, Canada.

Date Completed: September 25, 1929

Total Depth: 2477'

Initial Potential: 85 BOPD

**Deepest Well:** Empire State, Iowa Holding Co. No. 2. Jefferson (Devonian). T.D. 4920'

### Spacing Regulations:

220' from quarter-quarter section line and 430' between wells, 75' tolerance for topographic reasons. Field is delineated by Order No. 7-54.

### Special Field Rules:

State-wide rules, except Rules No. 207, 219, 211, 223 and 224, which do not apply.

**No. of Producing Wells:** 7

**Type of Trap:** Stratigraphic and structural

**Productive Formations:** Cut Bank (Lower Cretaceous)

**Probable Drive Mechanism:** Depletion drive



## BOWDOIN

County: Phillips and Valley

### Discovery Well:

Name: Martin well

Location: Sec. 18, T. 31N., R. 35E.

Date Completed: 1913

Total Depth: 740'

Initial Potential: Unknown

**Deepest Well:** Texaco, Dupont No. 1, Sec. 8, T. 32N., R. 32E. Cambrian. T.D. 5855'

### Spacing Regulations:

One well to each quarter-section; at least 1,000' from any lease boundary and 2,000' between wells; field not delineated.

### Special Field Rules:

State-wide rules.

**No. Producing Wells:** 364

**Type of Trap:** Structural

**Productive Formations:** Bowdoin and Phillips sands in upper part of Colorado shale (Cretaceous)

**Probable Drive Mechanism:** Volumetric

## BOWES

County: Blaine

### Discovery Well:

Name: California, Johnson & Hobson No. 1

Location: NE NE NE Sec. 9, T. 31N., R. 19E.

Date Completed: October 17, 1926

Total Depth: 4700'

Initial Potential: Show oil

**Deepest Well:** Northern Ordnance, Guertzen No. 5, Sec. 1, T. 31N., R. 19E. Devonian. T.D. 5082'

### Spacing Regulations:

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons; field delineated by Order No. 13-54.

### Special Field Rules:

State-wide rules.

**No. Producing Wells:** 74

**Type of Trap:** Structural

**Productive Formations:** Gas—Eagle (Upper Cretaceous); Oil—Sawtooth (Jurassic)

**Probable Drive Mechanism:** Eagle, volumetric; Sawtooth, water drive

**Secondary Recovery:** A pilot five spot waterflood was initiated in the Sawtooth formation on May 23, 1961.

## BOX ELDER

County: Blaine

### Discovery Well:

Name: Perkins, Stranahan No. 1

Location: NW NW NE Sec. 14, T. 32N., R. 17E.

Date Completed: June 17, 1931

Total Depth: 1276'

Initial Potential: 8000 MCFGPD

**Deepest Well:** Northern Ordnance, Morpheys No. 1, Sec. 14, T. 32N., R. 17E. Madison (Mississippian). T.D. 4212'

### Spacing Regulations:

State-wide rules

### Special Field Rules:

Not applicable

**Type of Trap:** Structural

**Productive Formations:** Eagle (Upper Cretaceous)

The Eagle sandstone is presently being used by The Montana Power Company for a gas storage reservoir.

## BRADY

County: Pondera

### Discovery Well:

Name: Texaco, Inc., Schlepp 1

Location: SE SE SE Sec. 21, T. 27N., R. 2W.

Date Completed: September 10, 1943

Total Depth: 1725'

Initial Potential: 14 BOPD

### Spacing Regulations:

Center of 10-acre spacing with 75' topographic tolerance permitted. Order No. 34-62 delineates the field.

**No. Producing Wells:** 12

**Type of Trap:** Structural

**Productive Formations:** Sunburst (Lower Cretaceous)

**Probable Drive Mechanism:** Depletion drive

## BREDETTE — NORTH

County: Daniels and Roosevelt

### Discovery Well:

Name: California Company, Paulson No. 1  
Location: NW SW Sec. 34, T. 33N., R. 49E.  
Date Completed: May 27, 1956  
Total Depth: 7475'  
Initial Potential: 114 BOPD, 7/64" ck.

**Deepest Well:** Above well. Madison (Mississippian)

### Spacing Regulations:

80-acre spacing, permitted wells in the NW¼ and SE¼ of each quarter section, 75' tolerance for topographic reasons. Field delineated by Order No. 20-56.

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 2

**Type of Trap:** Structural

**Productive Formations:** Charles (Mississippian)

**Probable Drive Mechanism:** Water drive

## CAT CREEK

County: Garfield and Petroleum

### Discovery Well:

Name: Frantz Corp., No. 1  
Location: SW SE NW Sec. 21, T. 15N., R. 30E.  
Date Completed: February, 1920  
Total Depth: 998'  
Initial Potential: 10 BOPD

**Deepest Well:** Arro-California, Charles No. 4, Sec. 21, T. 15N., R. 30E. Cambrian. T.D. 5705'

### Spacing Regulations:

220' from lease line, 440' between wells; field delineated by Orders No. 14-54 and 17-55

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 101

**Type of Trap:** Structural

**Productive Formations:** Kootenai, Morrison, Swift

**Probable Drive Mechanism:** Depletion drive

**Secondary Recovery:** A portion of the field has been unitized and a waterflood secondary recovery program is in progress. More details concerning this project appear earlier in the report

## CABIN CREEK

County: Fallon

### Discovery Well:

Name: Shell, No. 22-33  
Location: NE SE NW Sec. 33, T. 10N., R. 58E.  
Date Completed: June 9, 1953  
Total Depth: 9412'  
Initial Potential: 1248 BOPD, 32 BWPD, flow into open line.

**Deepest Well:** Shell, 21-17, Sec. 17, T. 10N., R. 58E. Pre-Cambrian. T.D. 10,573'

### Spacing Regulations:

Commission waives Rules No. 203, 213, 218 and 219 in unitized portion of field. Field delineated by Order No. 36-62.

**No. Producing Wells:** 116

**Type of Trap:** Structural

**Productive Formation:** Mission Canyon (Mississippian). Silurian-Ordovician

**Probable Drive Mechanism:** Mission Canyon, water drive; Siluro-Ordovician, depletion drive

**Secondary Recovery:** Pressure maintenance by water injection project is being expanded to include a larger portion of the field. More details concerning this project appear earlier in the report

**Water Disposal:** Produced water has been injected into the Dakota formation since 1957. More details appear earlier in the report.

## CEDAR CREEK

County: Fallon and Wibaux

### Discovery Well:

Name: Eastern Montana Oil & Gas Co.  
Location: NE NE Sec. 20, T. 14N., R. 55E.  
Date Completed: November, 1912  
Total Depth: 2710'  
Initial Potential: 2,500 MCFGPD (est.)

### Spacing Regulations:

Judith River: 1200' from quarter section line and 2400' between wells, 75' tolerance for topographic reasons. Field delineated by Order No. 33-54  
Eagle: 320-acre spacing, permitted wells to be located in the NW¼ and SE¼ of each section. A 200' topographic tolerance is permitted. Order No. 1-61

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 232

**Type of Trap:** Structural

**Productive Formations:** Judith River (Upper Cretaceous). Eagle (Upper Cretaceous)

**Probable Drive Mechanism:** Volumetric

## CLARKS FORK — NORTH

County: Carbon

### Discovery Well:

Name: British-American, Montana State No. 1  
Location: NE SE Sec. 16, T. 9S., R. 22E.  
Date Completed: January 30, 1956  
Total Depth: 10,877'  
Initial Potential: 338 BOPD, 1681 MCFGPD, 18/64" ck.

Deepest Well: Above well. Madison (Mississippian)

### Spacing Regulations:

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons; not delineated

### Special Field Rules:

State-wide rules

No. Producing Wells: 2

Type of Trap: Structural and stratigraphic

Productive Formations: Dakota (Lower Cretaceous).  
Lakota (Lower Cretaceous)

Probable Drive Mechanism: Gas cap and water drive

## CUPTON

County: Fallon

### Discovery Well:

Name: Rothschild, Northwest Improvement No. 44-15  
Location: SE SE Sec. 15, T. 9N., R. 59E.  
Date Completed: August 30, 1955  
Total Depth: 9785'  
Initial Potential: 306 BOPD, 165 BWPD

Deepest Well: Above well. Red River (Ordovician)

### Spacing Regulations:

80-acre spacing, permitted wells in the SE¼ and NW¼ of each quarter section, 75' tolerance for topographic reasons. Delineated by Order No. 6-62

### Special Field Rules:

State-wide rules

No. Producing Wells: 1

Type of Trap: Structural

Productive Formations: Red River (Ordovician)

Probable Drive Mechanism: Water drive

## CUT BANK

County: Glacier and Toole

### Discovery Well:

Name: Sand Point, Berger No. 1 (Gas well)  
Location: SE SE NW Sec. 1, T. 35N., R. 5W.  
Date Completed: 1926  
Total Depth: 2978'  
Initial Potential: 8,000 MCFGPD

Deepest Well: Union, Stufft 418-7. Cambrian. T.D. 5500'

### Spacing Regulations:

320' from quarter-quarter section line, 650' between wells, fifth well in center of 40 permitted, 75' tolerance for topographic reasons. Field delineated by Orders No. 10-54 and 21-59

### Special Field Rules:

State-wide rules except Rules 207, 211, 219, 221, 223 and 224 do not apply.

No. Producing Wells: 1082

Type of Trap: Statigraphic

Productive Formations: Kootenai (Lower Cretaceous);  
Madison (Mississippian)

Probable Drive Mechanism: Depletion drive

Secondary Recovery: Three partial field units have been formed for the purpose of initiating water-flood operations. More details appear earlier in this report

## DEER CREEK

County: Dawson

### Discovery Well:

Name: Texaco, No. 1 NP "G" (NCT-4)  
Location: SW SW Sec. 23, T. 17N., R. 53E.  
Date Completed: August 29, 1952  
Total Depth: 10,128'  
Initial Potential: 191 BOPD

Deepest Well: Texaco, Ekland No. 1, Sec. 26, T. 17N., R. 53E. Red River (Ordovician). T.D. 10,228'

### Spacing Regulations:

80-acre spacing, permitted well in the NE¼ and SW¼ of each quarter section, 75' tolerance for topographic reasons. Delineated by Order No. 23-55

### Special Field Rules:

State-wide rules

No. Producing Wells: 6

Type of Trap: Structural

Productive Formations: Red River (Ordovician); Inter-lake (Silurian)

Probable Drive Mechanism: Water drive

Water Disposal: An average of 402 BWPD at a pressure of 296 psig. was injected during 1962. Approximately 787,000 barrels of water have been disposed of into the Dakota formation since March, 1957 when the project started



## DELPHIA

County: Musselshell

### Discovery Well:

Name: Texota, Goffena No. 1

Location: NW NE Sec. 26, T. 9N., R. 27E.

Date Completed: December 20, 1956

Total Depth: 6311'

Initial Potential: 124 BOPD

Deepest Well: Texota-Bradley, Goffena No. A-1. Charles (Mississippian). T.D. 6811'

### Spacing Regulations:

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons. Field not delineated

### Special Field Rules:

State-wide rules

No. Producing Wells: 2

Type of Trap: Structural

Productive Formations: Amsden (Pennsylvanian)

Probable Drive Mechanism: Water drive

## DEVILS BASIN

County: Musselshell

### Discovery Well:

Name: Van Duzen Oil, No. 1

Location: NE SW NW Sec. 24, T. 11N., R. 24E.

Date Completed: December, 1919

Total Depth: 2110'

Initial Potential: 12 BOPD

Deepest Well: Clark Drilling Company, NP No. 1. Cambrian. T.D. 4081'

### Spacing Regulations:

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons; field not delineated

### Special Field Rules:

State-wide rules

No. Producing Wells: Shut-in

Type of Trap: Structural

Productive Formations: Heath (Upper Mississippian)

Probable Drive Mechanism: Depletion drive

## DEVON

County: Toole

### Discovery Well:

Name: Minot, Shelby Holding Co. No. 1

Location: SW NE Sec. 18, T. 33N., R. 2E.

Date Completed: 1926

Total Depth: 1795'

Initial Potential: 3500 MCFGPD

Deepest Well: Above well. Madison (Mississippian)

### Spacing Regulations:

1320' from lease line, 3700' between wells, 75' tolerance for topographic reasons. Field not delineated

### Special Field Rules:

State-wide rules

No. Producing Wells: 21

Type of Trap: Stratigraphic

Productive Formations: Blackleaf (Colorado Shale), (Lower Cretaceous)

Probable Drive Mechanism: Volumetric

## DRY CREEK

County: Carbon

### Discovery Well:

Name: Ohio Oil Company, NP No. 1

Location: 1940' N/S, 2900' W/E, Sec. 11, T. 7S., R. 21E.

Date Completed: March 31, 1929

Total Depth: 5772'

Initial Potential: 6500 MCFGPD (Frontier)

Deepest Well: Ohio Oil Company, NP No. 18, Sec. 3, T. 7S., R. 21E. Cambrian. T.D. 8882'

### Spacing Regulations:

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons; field not delineated

### Special Field Rules:

State-wide rules

No. Producing Wells: 3

Type of Trap: Structural

Productive Formations: Eagle (Upper Cretaceous) gas; Frontier (Upper Cretaceous) gas; Greybull (Lower Cretaceous) oil; Prior (Lower Cretaceous) oil

Probable Drive Mechanism: Gas sands, volumetric; oil sands, combinations water and depletion drive

## DWYER

County: Sheridan

### Discovery Well:

Name: Mobil, Muller No. F-44-20-P  
Location: SE SE Sec. 20, T. 32N., R. 59E.  
Date Completed: January 8, 1960  
Total Depth: 12,033'  
Initial Potential: 51 BOPD, 49 BWPD

**Deepest Well:** Above well. Red River (Ordovician)

### Spacing Regulations:

160-acre spacing, permitted well in the SE $\frac{1}{4}$  of each quarter section, 175' tolerance for topographic reasons, field delineated by Order No. 25-60, and 29-61

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 24

**Type of Trap:** Probably combination structural and stratigraphic

**Productive Formations:** Mission Canyon (Mississippian)

**Probable Drive Mechanism:** Water drive

## ELK BASIN

County: Carbon

### Discovery Well:

Name: Hurst No. 1  
Location: Sec. 30, T. 58N., R. 99W., Park County, Wyoming  
Date Completed: 1915  
Total Depth: 1402'  
Initial Potential: 1000 BOPD (Frontier)

### Spacing Regulations:

Commission waives Rule No. 203 within Unit Area, Order No. 10-61

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 57

**Type of Trap:** Structural

**Productive Formations:** Frontier (Upper Cretaceous); Dakota (Lower Cretaceous); Embar (Permian); Tensleep (Pennsylvanian); Madison (Mississippian)

**Probable Drive Mechanism:** Frontier, gravity drainage; Embar-Tensleep, gravity drainage; Madison, water drive

**Secondary Recovery:** Frontier, crestal gas injection with sweet gas; Embar-Tensleep, full pressure maintenance by crestal injection of inert gas, and water injection into the Madison. More details concerning these projects appear earlier in the report

## ELK-BASIN — NORTHWEST

County: Carbon

### Discovery Well:

Name: Sinclair Wyoming Oil Co., NW EB Unit No. 1  
Location: SW NW Sec. 28, T. 9S., R. 23E.  
Date Completed: July 22, 1947  
Total Depth: 6795'  
Initial Potential: 494 BOPD

**Deepest Well:** Sinclair, Pre-Madison Unit 1. T.D. 9463'. Cambrian

### Spacing Regulations:

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons; field not delineated

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 11

**Type of Trap:** Structural

**Productive Formations:** Frontier (Upper Cretaceous). Madison (Mississippian)

**Probable Drive Mechanism:** Frontier, depletion drive; Madison

**Secondary Recovery:** Waterflood operations are being conducted in the Frontier formation. Additional details appear earlier in the report

## FERTILE PRARIE

County: Fallon

### Discovery Well:

Name: Mon-O-Co, Ferguson-Goldin No. 1  
Location: SE SW Sec. 18, T. 7N., R. 61E.  
Date Completed: November 8, 1954  
Total Depth: 9286'  
Initial Potential: 132 BOPD

**Deepest Well:** McAlester Fuel, NP No. A-1. Winnipeg (Ordovician). T.D. 9684'

### Spacing Regulations:

80-acre spacing, permitted wells in the NW $\frac{1}{4}$  and SE $\frac{1}{4}$  of each quarter section, 75' tolerance for topographic reasons; field delineated by Order No. 7-62

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 1

**Type of Trap:** Structural

**Productive Formations:** Red River (Ordovician)

**Probable Drive Mechanism:** Water drive

## **FLAT COULEE**

**County:** Liberty

### **Discovery Well:**

**Name:** Northern Petroleum, Northern Farms 2

**Location:** NE SW Sec. 10, T. 37N., R. 5E.

**Date Completed:** 1933

**Total Depth:** 2879'

**Initial Potential:** 30 BOPD (Swift)

### **Spacing Regulations:**

40-acre oil well spacing, 150' tolerance for surface conditions, field delineated by Order No. 16-62.

Gas wells to be no less than 330' from quarter-quarter section line and 1320' between wells, 75' tolerance for topographic reasons.

### **Special Field Rules:**

State-wide rules

**No. Producing Wells:** 11 (Oil)

**Type of Trap:** Structural and stratigraphic

**Productive Formations:** Swift (Oil) Jurassic; Blackleaf (Gas) Cretaceous; Madison (Gas) Mississippian

**Probable Drive Mechanism:** Depletion drive (Swift)

## **FRANNIE**

**County:** Carbon

### **Discovery Well:**

**Name:** Pan American, Rosenberg C-1

**Location:** NW NE NW Sec. 25, T. 58N., R. 98W., Park County, Wyoming

**Date Completed:** February 28, 1928

**Total Depth:** 2612'

**Initial Potential:** 9 BOPD

### **Spacing Regulations:**

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons; field not delineated

### **Special Field Rules:**

State-wide rules

**No. Producing Wells:** 2

**Type of Trap:** Structural

**Productive Formations:** Tensleep (Pennsylvanian)

**Probable Drive Mechanism:** Combination water drive and gravity drainage

## **GAGE**

**County:** Musselshell

### **Discovery Well:**

**Name:** Northern Ordnance, Morris No. 1

**Location:** SW SW Sec. 15, T. 9N., R. 26E.

**Date Completed:** September 9, 1943

**Total Depth:** 7495'

**Initial Potential:** 120 BOPD

**Deepest Well:** Above well. Madison (Mississippian)

### **Spacing Regulations:**

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons; field not delineated

### **Special Field Rules:**

State-wide rules

**No. Producing Wells:** 2

**Type of Trap:** Combination structural and stratigraphic

**Productive Formations:** Amsden (Pennsylvanian)

**Probable Drive Mechanism:** Water drive

## **GAS CITY**

**County:** Dawson

### **Discovery Well:**

**Name:** Shell, No. 33X-21

**Location:** NE NW SE Sec. 21, T. 14N., R. 55E.

**Date Completed:** June 4, 1955

**Total Depth:** 9596'

**Initial Potential:** 202 BOPD, 5 BWPD, 22/64" ck.

**Deepest Well:** Above well. Winnipeg (Ordovician)

### **Spacing Regulations:**

Commission waives Rules No. 203, 213, 218 and 219 for unitized portion. Field delineated by Order No. 29-62

### **Special Field Rules:**

State-wide rules

**No. Producing Wells:** 27

**Type of Trap:** Structural

**Productive Formations:** Red River (Ordovician)

**Probable Drive Mechanism:** Water drive

**Water Disposal:** Order No. 32-61 permits the unit operator to dispose of produced salt water by injection into the Judith River formation



## GLENDIVE

**County:** Dawson

### Discovery Well:

**Name:** Texaco, NP "G" (NCT-1) No. 1

**Location:** NE NE Sec. 35, T. 15N., R. 54E.

**Date Completed:** January 10, 1952

**Total Depth:** 9079'

**Initial Potential:** 254 BOPD

**Deepest Well:** Texaco, NP "G" (NCT-1) No. 2. Winnipeg (Ordovician). T.D. 10,537'

### Spacing Regulations:

80-acre spacing, permitted well in the NE $\frac{1}{4}$  and SW $\frac{1}{4}$  of each quarter section, 75' tolerance for topographic reasons. Field delineated by Order Nos. 19-62 and 58-62

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 11

**Type of Trap:** Stratigraphic and structural

**Productive Formations:** Interlake (Silurian). Stony Mountain-Red River (Ordovician)

**Probable Drive Mechanism:** Water drive

**Water Disposal:** Water disposal started March 25, 1956.  
More details appear earlier in report

## GRABEN COULEE

**County:** Glacier

### Discovery Well:

**Name:** Cardinal Petr., McAlpine 1

**Location:** NE SW Sec. 3, T. 37N., R. 5W.

**Date Completed:** December 7, 1961

**Total Depth:** 2816'

**Initial Potential:** 56 BOPD

### Spacing Regulations:

Sunburst: One well per 40 acres, no closer than 330' from quarter-quarter section boundary. Cut Bank and Madison: 10-acre spacing with center 5-spot well also permitted. Field delineated by Order No. 73-62

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 15

**Type of Trap:** Structural and stratigraphic

**Productive Formations:** Sunburst (L. Cret.), Cut Bank (Cretaceous), Madison (Mississippian)

**Probable Drive Mechanism:** Depletion drive

## GYPSY BASIN

**County:** Teton and Pondera

### Discovery Well:

**Name:** Western Oils, Bills No. 1

**Location:** SW SE SW Sec. 31, T. 28N., R. 6W.

**Date Completed:** July 8, 1951

**Total Depth:** 3410'

**Initial Potential:** 50 BOPD

**Deepest Well:** Above well. Madison (Mississippian)

### Spacing Regulations:

Center of 40 acres, 150' tolerance for topographic reasons. Field delineated by Order No. 13-59

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 4

**Type of Trap:** Combination structural and stratigraphic

**Productive Formations:** Madison (Mississippian)

**Probable Drive Mechanism:** Combination water drive and depletion drive

## HARDIN

**County:** Big Horn

### Discovery Well:

**Name:** Yellowstone Oil & Gas, Blair No. 1

**Location:** Sec. 10, T. 1S., R. 33E.

**Date Completed:** 1913

**Total Depth:** Unknown

**Initial Potential:** Unknown

**Deepest Well:** Daniels Petroleum Co., No. 1, Sec. 13, T. 1S., R. 33E. Madison (Mississippian). T.D. 4195'

### Spacing Regulations:

1320' from lease line, 3700' between wells, 75' tolerance for topographic reasons; not delineated

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 41

**Type of Trap:** Stratigraphic

**Productive Formations:** Frontier (Cretaceous)

**Probable Drive Mechanism:** Volumetric

## HIBBARD

County: Rosebud

### Discovery Well:

Name: Sinclair, Kesterson No. 1  
Location: SE NW Sec. 34, T. 10 N., R. 33E.  
Date Completed: February 29, 1960  
Total Depth: 5240'  
Initial Potential: 240 BOPD

Deepest Well: Above well. Heath (Mississippian)

### Spacing Regulations:

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons. Field not delineated

### Special Field Rules:

State-wide rules

No. Producing Wells: 1

Type of Trap: Unknown

Productive Formations: Amsden (Pennsylvanian)

Probable Drive Mechanism: Water drive

## KEG COULEE

County: Musselshell

### Discovery Well:

Name: American-Climax Petr. Corp., DeJaegher No. 1  
Location: SE NE Sec. 31, T. 11N., R. 31E.  
Date Completed: April 1, 1960  
Total Depth: 4635'  
Initial Potential: 177 BOPD

### Spacing Regulations:

80-acre spacing, pattern varies; 100' tolerance for topographic reasons. Field delineated by Order No. 11-60

### Special Field Rules:

State-wide rules

No. Producing Wells: 13

Type of Trap: Stratigraphic

Productive Formations: Tyler (Pennsylvanian)

Probable Drive Mechanism: Depletion drive

## IVANHOE

County: Musselshell

### Discovery Well:

Name: Chicago-Republic, No. 1  
Location: SW SE NE Sec. 17, T. 11N., R. 31E.  
Date Completed: September 15, 1953  
Total Depth: 5210'  
Initial Potential: 92 BOPD (Morrison)

Deepest Well: Above well. Charles (Mississippian)

### Spacing Regulations:

Center of 40-acre, 200' tolerance for topographic reasons. Delineated by Orders No. 13-56 and 7-60

### Special Field Rules:

State-wide rules

No. Producing Wells: 18

Type of Trap: Structural and stratigraphic

Productive Formations: Morrison (Jurassic). Amsden (Pennsylvanian). Tyler (Mississippian)

Probable Drive Mechanism: Morrison and Tyler, depletion drive; Amsden, water drive

## KEITH — EAST

County: Liberty

### Discovery Well:

Name: Texaco, Cicon No. 1  
Location: NE NW SW Sec. 29, T. 36N., R. 6E.  
Date Completed: December 17, 1944  
Total Depth: 3221'  
Initial Potential: 3000 MCFGPD

Deepest Well: Montana Power, Sorrel-Govt. No. 1. Cambrian. T.D. 5015'

### Spacing Regulations:

640-acre spacing. Delineated by Order No. 22-62

### Special Field Rules:

State-wide rules

No. Producing Wells: 6

Type of Trap: Structural

Productive Formations: Bow Island (Cretaceous); Sawtooth-Madison (Jurassic-Mississippian)

Probable Drive Mechanism: Water drive

## KEVIN-SUNBURST

County: Toole

### Discovery Well:

Name: Gordon Campbell-Kevin Syndicate, Goedertzt No. 1

Location: NE NE NE Sec. 16, T. 35N., R. 3W.

Date Completed: March 14, 1922

Total Depth: 2540'

Initial Potential: 10 BOPD

Deepest Well: Lee Edwards, Inland Empire No. 1, Pre-Cambrian. T.D. 4916'

### Spacing Regulations:

9 wells per 40-acre tract, only 3 wells on any side of tract set back at least 220' from line, 75' tolerance for topographic reasons. Field delineated by Orders No. 8-54 and 28-55

### Special Field Rules:

State-wide rules, except Rules No. 207, 211, 219, 221, 223 and 224 do not apply

No. Producing Wells: 1006

Type of Trap: Stratigraphic

Productive Formations: Madison (Mississippian); Sawtooth (Jurassic); Sunburst (Cretaceous)

Probable Drive Mechanism: Depletion drive

Secondary Recovery: Two small pilot waterfloods are now in operation. Results of these floods are yet inconclusive. Additional data concerning these pilots appears earlier in the report.

## LAKE BASIN — NORTH

County: Stillwater

### Discovery Well:

Name: Holland-American, Castle No. 1

Location: NW SE Sec. 22, T. 2N., R. 21E.

Date Completed: January 11, 1958

Total Depth: 4179'

Initial Potential: 480 MCFGPD, Eagle; 4500 MCFGPD, Frontier

Deepest Well: Superior, Copulos 71-22. Pre-Cambrian. T.D. 7929'

### Spacing Regulations:

640-acre spacing, permitted well in the NW SE of each section, 75' tolerance for topographic reasons. Delineated by Order No. 6-58

### Special Field Rules:

State-wide rules. Frontier and Eagle may be dually completed without provisions of Rule 219

No. Producing Wells: Shut-in

Type of Trap: Structural

Productive Formations: Eagle (Cretaceous); Frontier (Cretaceous)

Probable Drive Mechanism: Unknown

## LAUREL

County: Yellowstone

### Discovery Well:

Name: King Oil Company, Van Winkle 1

Location: NE SE Sec. 24, T. 2S., R. 24E.

Date Completed: July 7, 1961

Total Depth: 1000'

Initial Potential: 45 BOPD

Deepest Well: Pan American Syn., SW SW NE, Sec. 23, T. 2S., R. 24E. T.D. 2365'

### Spacing Regulations:

10-acre spacing with 75' tolerance for topographic conditions. Field is delineated by Order No. 15-62

### Special Field Rules:

State-wide rules

No. Producing Wells: Shut-in

Type of Trap: Structural and stratigraphic

Productive Formation: Dakota (Cret.)

Probable Drive Mechanism: Depletion drive

## LITTLE BEAVER

County: Fallon

### Discovery Well:

Name: Shell, Unit No. 23-13

Location: NE SW Sec. 13, T. 4N., R. 61E.

Date Completed: July 30, 1952

Total Depth: 8553'

Initial Potential: 313 BOPD, 33 BWPD

Deepest Well: Carter, NP No. 1, Sec. 19, T. 4N., R. 62E. Pre-Cambrian. T.D. 9676'

### Spacing Regulations:

Commission waives Rules No. 203, 213, 218 and 219. Field delineated by Order No. 41-62

### Special Field Rules:

State-wide rules

No. Producing Wells: 24

Type of Trap: Structural

Productive Formations: Red River (Ordovician)

Probable Drive Mechanism: Combination depletion and water drive



## **LITTLE BEAVER — EAST**

**County:** Fallon

### **Discovery Well:**

**Name:** Montana-Dakota Utilities, NP No. 1

**Location:** Sec. 17, T. 4N., R. 62E.

**Date Completed:** October, 1952

**Total Depth:** 8186'

**Initial Potential:** 25 BOPD

**Deepest Well:** Shell, No. 14-34, Sec. 34, T. 5N., R. 61E.  
Red River (Ordovician). T.D. 8471'

### **Spacing Regulations:**

Commission waives Rules No. 203, 213, 218 and 219.

Field delineated by Order No. 42-62

### **Special Field Rules:**

State-wide rules

**No. Producing Wells:** 23

**Type of Trap:** Structural

**Productive Formations:** Red River (Ordovician)

**Probable Drive Mechanism:** Combination depletion and water drive

**Water Disposal:** Details of this project appear earlier in this report

## **LOOKOUT BUTTE**

**County:** Fallon

### **Discovery Well:**

**Name:** Continental Oil, NP A-29, No. 2

**Location:** SE SW Sec. 29, T. 7N., R. 60E.

**Date Completed:** December 26, 1961

**Total Depth:** 8851'

**Initial Potential:** 495 BOPD, 11 BWPD, 22/64" ck.

### **Spacing Regulations:**

160-acre spacing, permitted well to be in SE $\frac{1}{4}$  of each spacing unit, 150' topographic tolerance, delineated by Order No. 21-62. Coral Creek Unit portion of field not subject to spacing

### **Special Field Rules:**

State-wide rules

**No. Producing Wells:** 46

**Type of Trap:** Structural

**Productive Formations:** Silurian, Ordovician

**Probable Drive Mechanism:** Combination depletion drive with partial water drive.

## **MELSTONE**

**County:** Musselshell

### **Discovery Well:**

**Name:** Amerada, Hougén No. 1

**Location:** SE SE Sec. 23, T. 10N., R. 29E.

**Date Completed:** October 18, 1948

**Total Depth:** 4228'

**Initial Potential:** 655 BOPD,  $\frac{3}{4}$ " ck.

**Deepest Well:** Amerada, Hougén No. 2 Sec. 23, T. 10N., R. 29E. Cambrian. T.D. 7626'

### **Spacing Regulations:**

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons. Field not delineated

### **Special Field Rules:**

State-wide rules

**No. Producing Wells:** 5

**Type of Trap:** Structural and stratigraphic

**Productive Formations:** Tyler (Pennsylvanian)

**Probable Drive Mechanism:** Depletion drive

**Water Disposal:** Produced water was injected into the Tyler "B" zone from February, 1954 to May, 1958. A total of 1,056,000 barrels were injected before the injection well plugged

## **MONARCH**

**County:** Fallon

### **Discovery Well:**

**Name:** Shell, NP 12-23

**Location:** Sec. 23, T. 9N., R. 58E.

**Date Completed:** November 18, 1958

**Total Depth:** 9175'

**Initial Potential:** 218 BOPD, 13 BWPD

**Deepest Well:** Above well. Red River (Ordovician)

### **Spacing Regulations:**

160-acre spacing, SW $\frac{1}{4}$  of each quarter section, 175' tolerance for topographic reasons, Siluro-Ordovician pool. Delineated by Order No. 12-59.

80-acre spacing, with permitted wells to be in the SW $\frac{1}{4}$  or NE $\frac{1}{4}$  of each quarter-quarter section, wells to be no closer than 330' from boundary of permitted quarter-quarter section, Madison pool. Delineated by Order No. 18-61.

### **Special Field Rules:**

State-wide rules

**No. Producing Wells:** 16

**Type of Trap:** Structural and stratigraphic

**Productive Formations:** Red River (Ordovician); Interlake (Silurian); Mission Canyon (Mississippian)

**Probable Drive Mechanism:** Depletion drive with partial water drive

## **MOSSER**

**County:** Yellowstone

**Discovery Well:**

**Name:** Tarrant, Mosser No. 2

**Location:** SW SW NE Sec. 26, T. 3S., R. 24E.

**Date Completed:** January 25, 1937

**Total Depth:** 1027'

**Initial Potential:** 60 BOPD

**Deepest Well:** Tarrant, Mosser No. 1, Sec. 26, T. 3S., R. 24E. Madison (Mississippian). T.D. 2568'

**Spacing Regulations:**

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons. Order No. 21-56 establishes some exceptions

**Special Field Rules:**

State-wide rules

**No. Producing Wells:** 6

**Type of Trap:** Structural

**Productive Formations:** Dakota (Lower Cretaceous)

**Probable Drive Mechanism:** Water drive

## **MUSSELSHELL**

**County:** Rosebud

**Discovery Well:**

**Name:** Sumatra Oil Corp., DeJaegher 2

**Location:** SE NE Sec. 22, T. 11N., R. 31E.

**Date Completed:** July, 1962

**Total Depth:** 4420'

**Initial Potential:** 342 BOPD, 0.2% BS&W

**Spacing Regulations:**

330' from quarter-quarter section line and 1320' between wells, 75' topographic tolerance. Field not delineated

**Special Field Rules:**

State-wide rules

**No. Producing Wells:** 2

**Type of Trap:** Structural and stratigraphic

**Productive Formations:** Tyler (Pennsylvanian)

**Probable Drive Mechanism:** Depletion drive

## **OUTLOOK**

**County:** Sheridan

**Discovery Well:**

**Name:** Amerada, Tange No. 1

**Location:** Sec. 20, T. 36N., R. 53E.

**Date Completed:** December 22, 1956

**Total Depth:** 9950'

**Initial Potential:** 2742 BOPD

**Deepest Well:** Amerada, A. Johnson No. 1, Sec. 33, T. 36N., R. 53E. Pre-Cambrian. T.D. 11,074'

**Spacing Regulations:**

160-acre spacing, permitted wells can be in either SW $\frac{1}{4}$  or NE $\frac{1}{4}$  of each quarter section, 175' tolerance for topographic reasons. Delineated by Order No. 19-59A

**Special Field Rules:**

State-wide rules

**No. Producing Wells:** 15

**Type of Trap:** Stratigraphic and structural

**Productive Formations:** Silurian-Devonian. Red River (Ordovician)

**Probable Drive Mechanism:** Water drive

**Water Disposal:** Produced water disposal began January 12, 1960 into the Dakota formation. More details appear earlier in the report

## **PENNEL**

**County:** Fallon

**Discovery Well:**

**Name:** Shell, State No. 22X-36

**Location:** SE NW Sec. 36, T. 8N., R. 59E.

**Date Completed:** September 8, 1955

**Total Depth:** 9242'

**Initial Potential:** 205 BOPD, 39 BWPD

**Deepest Well:** Above well. Winnipeg (Ordovician)

**Spacing Regulations:**

80-acre, permitted wells in the NW $\frac{1}{4}$  and SE $\frac{1}{4}$  of each quarter section, 150' tolerance for topographic reasons in western portion of field.

160-acre spacing with permitted wells in the SE $\frac{1}{4}$  of each quarter section, 150' topographic tolerance in eastern portion of pool. See Order No. 20-62.

**No. Producing Wells:** 66

**Type of Trap:** Structural

**Productive Formations:** Lodgepole (Mississippian); Mission Canyon (Mississippian); Siluro-Ordovician

**Probable Drive Mechanism:** Combination depletion drive and water drive

**Water Disposal:** Produced salt water is being injected into the Siluro-Ordovician, Dakota and Madison reservoirs. More details appear earlier in report

## PINE

County: Fallon, Wibaux, Prairie and Dawson

### Discovery Well:

Name: Shell, Pine Unit No. 32-30

Location: SW SW NE Sec. 30, T. 12N., R. 57E.

Date Completed: January 28, 1952

Total Depth: 9746'

Initial Potential: 467 BOPD, 148 BWPD

**Deepest Well:** Shell, 43-22A, Sec. 22, T. 11N., R. 57E.  
Pre-Cambrian. T.D. 10,414'

### Spacing Regulations:

Commission waives Rules No. 203, 213, 218 and 219.  
Field delineated by Order No. 37-62

**No. Producing Wells:** 152

**Type of Trap:** Structural

**Productive Formations:** Silurian-Ordovician

**Probable Drive Mechanism:** Combination depletion  
and water drive

**Secondary Recovery:** A partial pressure maintenance  
program was initiated March 10, 1959 by injecting  
water into the producing horizon. Additional de-  
tails and data appear earlier in the report

**Water Disposal:** Produced water has been disposed of  
by injecting into the Dakota formation since Oc-  
tober, 1958. A total of about 3,035,000 barrels had  
been injected to January 1, 1962. There have been  
no disposal injections since April, 1961

## PLEVNA

County: Fallon

### Discovery Well:

Name: F. H. Becker No. 1

Location: NE NE SE Sec. 28, T. 5N., R. 60E.

Date Completed: January 18, 1946

Total Depth: 1053'

Initial Potential: 300 MCFGPD

**Deepest Well:** True Oil, NP-Plevna 1, NE SW Sec. 29,  
T. 5N., R. 60E., Red River. T.D. 8940'

### Spacing Regulations:

1200' from quarter section line, 2400' between wells,  
75' tolerance for topographic reasons. Field de-  
lineated by Orders No. 34-54 and 4-57

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 27

**Type of Trap:** Structural

**Productive Formations:** Judith River (Upper Creta-  
ceous)

**Probable Drive Mechanism:** Water drive

## PONDERA

County: Teton

### Discovery Well:

Name: Midwest Refining, Haber No. 1

Location: SE SE Sec. 17, T. 27N., R. 4W.

Date Completed: June, 1927

Total Depth: 2072'

Initial Potential: 3 BOPD, 3500 MCFGPD

**Deepest Well:** Wasatch Oil, Hirshberg No. 1, Sec. 23,  
T. 27N., R. 4W. Pre-Cambrian. T.D. 5233'

### Spacing Regulations:

220' from quarter-quarter section line, 430' between  
wells, 75' tolerance for topographic reasons. De-  
lineated by Order No. 9-54

### Special Field Rules:

State-wide rules, except Rules No. 207, 211, 219, 221,  
223 and 224 do not apply

**No. Producing Wells:** 293

**Type of Trap:** Structural and stratigraphic

**Productive Formations:** Madison (Mississippian)

**Probable Drive Mechanism:** Combination depletion  
drive with limited water drive

**Secondary Recovery:** Commission has granted one op-  
erator approval to initiate a one injection well  
pilot waterflood. More details appear earlier in  
this report

## PONDERA COULEE

County: Teton

### Discovery Well:

Name: Perl Smith, Louttit-Mills 1

Location: SE NE Sec. 4, T. 27N., R. 5W.

Date Completed: December 21, 1961

Total Depth: 2452'

Initial Potential: 30 BOPD

### Spacing Regulations:

10-acre spacing, 75' topographic tolerance, field  
delineated by Order No. 5-62

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 2

**Type of Trap:** Structural

**Productive Formations:** Madison (Mississippian)

**Probable Drive Mechanism:** Water drive



## POPLAR

**County:** Roosevelt

**Discovery Well:**

**Name:** East Poplar Unit No. 1 Murphy Corp.  
**Location:** SW NE Sec. 2, T. 28N., R. 51E.  
**Date Completed:** March 10, 1952  
**Total Depth:** 9163'  
**Initial Potential:** 233 BOPD

**Deepest Well:** Above well. Winnipeg (Ordovician)

**Spacing Regulations:**

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons. Delineated by Order No. 7-55

**Special Field Rules:**

State-wide rules

**No. Producing Wells:** 89

**Type of Trap:** Structural

**Productive Formations:** Charles-Mission Canyon (Mississippian)

**Probable Drive Mechanism:** Water drive

**Secondary Recovery:** Partial pressure maintenance by water injection was started in September, 1956. More details appear earlier in the report

**Water Disposal:** Excess produced water has been injected into the Dakota and Judith River formations since September, 1957. More details appear earlier in the report

## POPLAR — NORTHWEST

**County:** Roosevelt

**Discovery Well:**

**Name:** Ajax Oil, McGowan No. 1  
**Location:** SE SW Sec. 10, T. 29N., R. 50E.  
**Date Completed:** May 12, 1952  
**Total Depth:** 6274'  
**Initial Potential:** 75 BOPD, 25 BWPD

**Deepest Well:** Humble, Harry Mason No. 1. Interlake (Silurian). T.D. 8392'

**Spacing Regulations:**

80-acre spacing, permitted wells in the NW¼ and SE¼ of each quarter section, 75' tolerance for topographic reasons. Field delineated by Order No. 18-55

**Special Field Rules:**

State-wide rules. Order No. 18-55 lists special well completion practices to be followed

**No. Producing Wells:** 4

**Type of Trap:** Structural

**Productive Formations:** Charles-Mission Canyon (Mississippian)

**Probable Drive Mechanism:** Water drive

## RAGGED POINT

**County:** Musselshell

**Discovery Well:**

**Name:** Texaco, Manion No. 1  
**Location:** SE SW Sec. 5, T. 11N., R. 30E.  
**Date Completed:** January 4, 1948  
**Total Depth:** 6312'  
**Initial Potential:** 236 BOPD, 5% water

**Deepest Well:** Above well. Cambrian

**Spacing Regulations:**

Center of 40 acres, 75' tolerance for topographic reasons. Delineated by Orders No. 15-54 and 8-59

**Special Field Rules:**

State-wide rules

**No. Producing Wells:** 17

**Type of Trap:** Structural and stratigraphic

**Productive Formations:** Kibbey and Tyler (Mississippian)

**Probable Drive Mechanism:** Kibbey, water drive; Tyler, depletion drive

## RAPELJE

**County:** Stillwater

**Discovery Well:**

**Name:** Shoreline Petroleum, C. F. Kirchner No. 1  
**Location:** NE SW Sec. 4, T. 2N., R. 20E.  
**Date Completed:** November 18, 1960  
**Total Depth:** 4064'  
**Initial Potential:** 840 MCFGPD

**Deepest Well:** Above well. Morrison (Jurassic)

**Spacing Regulations:**

1320' from lease line, 3700' between wells, 75' tolerance for topographic reasons. Field not delineated

**Special Field Rules:**

State-wide rules

**No. Producing Wells:** Shut-in

**Type of Trap:** Unknown

**Productive Formations:** Eagle (Cretaceous)

**Probable Drive Mechanism:** Unknown

## REAGAN

County: Glacier

### Discovery Well:

Name: Reagan Associates, Tribal 194-1  
Location: SE NE Sec. 22, T. 37N., R. 7W.  
Date Completed: March 29, 1941  
Total Depth: 3869'  
Initial Potential: 6000 MCFGPD

Deepest Well: Union Oil, Blackfeet Tribal 194-12. Cambrian. T.D. 6258'

### Spacing Regulations:

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons

### Special Field Rules:

State-wide rules

No. Producing Wells: 43

Type of Trap: Structural

Productive Formations: Madison (Mississippian)

Probable Drive Mechanism: Combination gas cap and water drive

Secondary Recovery: A pressure maintenance project utilizing crestal gas injection was initiated during August, 1961. Additional details appear earlier in this report

## RED CREEK

County: Glacier

### Discovery Well:

Name: G. S. Frary, Isabel Moberly No. 1  
Location: SW SW Sec. 1, T. 37N., R. 5W.  
Date Completed: January 16, 1958  
Total Depth: 2656'  
Initial Potential: 1500 MCFGPD

Deepest Well: Pardee-Inland Empire, McAlpine No. 1, Madison (Mississippian). T.D. 2990'

### Spacing Regulations:

Center of 40 acres, 75' tolerance for topographic reasons. Delineated by Orders No. 16-58 and 73-62

### Special Field Rules:

State-wide rules. Rule 219 waived

No. Producing Wells: 26

Type of Trap: Structural and stratigraphic

Productive Formations: Cut Bank (Lower Cretaceous), Madison (Mississippian)

## RED STONE

County: Sheridan

### Discovery Well:

Name: H. L. Hunt, Hagen No. 1  
Location: NE NW Sec. 7, T. 34N., R. 52E.  
Date Completed: November 1, 1958  
Total Depth: 10,700'  
Initial Potential: 100 BOPD

Deepest Well: Above well. Cambrian

### Spacing Regulations:

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons. Field not delineated

### Special Field Rules:

State-wide rules

No. Producing Wells: 1

Type of Trap: Unknown

Productive Formations: Devonian

Probable Drive Mechanism: Water drive

## REPEAT

County: Carter

### Discovery Well:

Name: Ohio Oil, Govt. No. 1  
Location: Lot 4, Sec. 4, T. 1S., R. 62E.  
Date Completed: March 27, 1956  
Total Depth: 9362'  
Initial Potential: 186 BOPD, 2% water

Deepest Well: Above well. Winnipeg (Ordovician)

### Spacing Regulations:

330' from quarter-quarter section line, 1320' between wells, 75' tolerance for topographic reasons. Field not delineated

### Special Field Rules:

State-wide rules

No. Producing Wells: 1

Type of Trap: Unknown

Productive Formations: Red River (Ordovician)

Probable Drive Mechanism: Water drive

## RICHEY

**County:** Dawson and McCone

### Discovery Well:

**Name:** Shell, NP No. 11-9

**Location:** SE NW NW Sec. 19, T. 23N., R. 50E.

**Date Completed:** November 29, 1951

**Total Depth:** 10,518'

**Initial Potential:** 1656 BOPD, 408 BWPD, 32/64" ck.

**Deepest Well:** Above well. Ordovician

### Spacing Regulations:

80-acre spacing, permitted wells in the NW¼ and SE¼ of each quarter section, 75' tolerance for topographic reasons. Field delineated by Order No. 21-55

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 9

**Type of Trap:** Structural

**Productive Formations:** Charles (Mississippian)

**Probable Drive Mechanism:** Water drive

**Water Disposal:** Part of the produced water in this field is being injected into the Dakota formation. More details appear earlier in the report

## RICHEY — SOUTHWEST

**County:** McCone

### Discovery Well:

**Name:** Shell, NP No. 22-25B

**Location:** SE NW Sec. 25, T. 22N., R. 48E.

**Date Completed:** 1952

**Total Depth:** 10,188'

**Initial Potential:** 51 BOPD

**Deepest Well:** Above well. Winnipeg (Ordovician)

### Spacing Regulations:

160-acre spacing, well to be located no closer than 900' from boundary of spacing unit. Field delineated by Order No. 25-62

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 5

**Type of Trap:** Structural

**Productive Formations:** Interlake (Silurian); Dawson Bay (Devonian)

**Probable Drive Mechanism:** Depletion drive

## RUDYARD

**County:** Hill

### Discovery Well:

**Name:** Texaco, Anderson No. 1

**Location:** SE SW Sec. 27, T. 34N., R. 9E.

**Date Completed:** December 9, 1955

**Total Depth:** 3435'

**Initial Potential:** 3500 MCFGPD

**Deepest Well:** Texaco, R. E. Blair No. 1, NW SE Sec. 28, T. 34N., R. 9E. Pre-Cambrian. T.D. 6550'

### Spacing Regulations:

640-acre spacing, permitted well in C NW¼, 150' tolerance for topographic reasons. Field delineated by Order No. 2-58

### Special Field Rules:

State-wide rules

**No. Producing Wells:** Shut-in

**Type of Trap:** Structural

**Productive Formations:** Sawtooth (Jurassic)

**Probable Drive Mechanism:** Volumetric

## SAND CREEK

**County:** Dawson

### Discovery Well:

**Name:** Texaco, Gneiff No. 1

**Location:** SE NE Sec. 4, T. 15N., R. 54E.

**Date Completed:** March 8, 1959

**Total Depth:** 9684'

**Initial Potential:** 408 BOPD

**Deepest Well:** Above well. Red River (Ordovician)

### Spacing Regulations:

80-acre spacing, permitted wells in the NW¼ and SE¼ of each quarter section, 150' tolerance for topographic reasons. Field delineated by Order No. 16-59

### Special Field Rules:

State-wide rules

**No. Producing Wells:** 5

**Type of Trap:** Structural

**Productive Formations:** Interlake (Silurian); Red River (Devonian)

**Probable Drive Mechanism:** Water drive

**Water Disposal:** The disposal of produced salt water by injection into the Swift formation was initiated June 28, 1961. More details appear earlier in the report

## **SIDNEY-BRORSON**

**County:** Richland

### **Discovery Well:**

**Name:** Wendell C. Flynn, Beagle Land & Livestock Co. No. 1

**Location:** SW SW Sec. 17, T. 23N., R. 59E.

**Date Completed:** September 11, 1958

**Total Depth:** 13,135'

**Initial Potential:** 50 BOPD

**Deepest Well:** Above well. Winnipeg (Devonian)

### **Spacing Regulations:**

Temporary 320-acre spacing, well to be located in the NW¼ and SE¼ of each section. Field delineated by Order No. 30-62

### **Special Field Rules:**

State-wide rules

**No. Producing Wells:** 6

**Type of Trap:** Unknown

**Productive Formations:** Mission Canyon (Mississippian)

**Probable Drive Mechanism:** Water drive

## **SNYDER**

**County:** Big Horn

### **Discovery Well:**

**Name:** George Greer, Kendrick No. 2

**Location:** NE NW NW Sec. 6, T. 1S., R. 35E.

**Date Completed:** October 4, 1952

**Total Depth:** 4588'

**Initial Potential:** 150 BOPD

**Deepest Well:** George Greer, Kendrick No. 3, Sec. 6, T. 1S., R. 35E. Winnipeg (Ordovician). T.D. 6808'

### **Spacing Regulations:**

10-acre spacing with center 5-spot permitted. Field delineated by Order No. 45-62

### **Special Field Rules:**

State-wide rules

**No. Producing Wells:** 4

**Type of Trap:** Structural

**Productive Formations:** Tensleep (Pennsylvanian)

**Probable Drive Mechanism:** Water drive

## **SOAP CREEK**

**County:** Big Horn

### **Discovery Well:**

**Name:** Western States Oil & Gas Co., Tribal No. 1

**Location:** Approx. center Sec. 34, T. 6S., R. 32E.

**Date Completed:** February 11, 1921

**Total Depth:** 1966'

**Initial Potential:** 200 BOPD

**Deepest Well:** Inland Empire, Tribal 52-34. Sec. 34, T. 6S., R. 32E. Pre-Cambrian. T.D. 4470'

### **Spacing Regulations:**

Center of 10 acres, 100' tolerance for topographic reasons. Delineated by Order No. 26-60

### **Special Field Rules:**

State-wide rules

**No. Producing Wells:** 17

**Type of Trap:** Structural

**Productive Formations:** Tensleep, Amsden (Pennsylvanian); Madison (Mississippian)

**Probable Drive Mechanism:** Water drive

## **STENSVAD**

**County:** Musselshell and Rosebud

### **Discovery Well:**

**Name:** Honolulu, Stensvad No. 11-9

**Location:** NE SE Sec. 11, T. 11N., R. 31E.

**Date Completed:** December 20, 1958

**Total Depth:** 5516'

**Initial Potential:** 448 BOPD

### **Spacing Regulations:**

Center of 40 acres, 200' tolerance for topographic reasons. Delineated by Orders No. 2-59, 22-59, 7-60

### **Special Field Rules:**

State-wide rules

**No. Producing Wells:** 25

**Type of Trap:** Stratigraphic

**Productive Formations:** Tyler (Mississippian)

**Probable Drive Mechanism:** Depletion drive

**Secondary Recovery:** The operators in this field are in the process of forming a unit in order to initiate waterflood operations



## SUMATRA

**County:** Rosebud

**Discovery Well:**

**Name:** Farmers Union, Sawyer No. 1

**Location:** NE SW Sec. 26, T. 11N., R. 32E.

**Date Completed:** October 8, 1950

**Total Depth:** 5277'

**Initial Potential:** 50 BOPD

**Deepest Well:** Texas, Horgen No. 1. Sec. 13, T. 11N., R. 32E. Kibbey (Mississippian). T.D. 5657'

**Spacing Regulations:**

Center of 40 acres, tolerance at Commission's discretion. Delineated by Order No. 14-58

**Special Field Rules:**

State-wide rules

**No. Producing Wells:** 101

**Type of Trap:** Stratigraphic

**Productive Formations:** Amsden (Pennsylvanian); Tyler (Mississippian)

**Probable Drive Mechanism:** Depletion drive

## TULE CREEK

**County:** Roosevelt

**Discovery Well:**

**Name:** Murphy, Sletvold No. 1

**Location:** SE SE Sec. 18, T. 30N., R. 48E.

**Date Completed:** October 27, 1960

**Total Depth:** 8478'

**Initial Potential:** 476 BOPD, 14/64" ck.

**Deepest Well:** Above well. Dawson Bay (Devonian)

**Spacing Regulations:**

160-acre spacing. Well to be located no closer than 900' from any boundary of spacing unit. Field delineated by Order No. 26-62

**Special Field Rules:**

Semi-annual B.H.P. surveys, with minimum of 12 hours shut-in

**No. Producing Wells:** 8

**Type of Trap:** Structural

**Productive Formations:** Nisku (Devonian)

**Probable Drive Mechanism:** Water drive

## UTOPIA

**County:** Liberty

**Discovery Well:**

**Name:** Texaco, State M-1094

**Location:** NW SE SE Sec. 16, T. 33N., R. 4E.

**Date Completed:** October 5, 1943

**Total Depth:** 2579'

**Initial Potential:** 15 BOPD (Field produces gas)

**Deepest Well:** Texaco, Laas No. 2. Sec. 14, T. 33N., R. 4E. Cambrian. T.D. 4593'

**Spacing Regulations:**

1320' from lease line, 3700' between wells, 75' tolerance for topographic reasons. Field not delineated

**Special Field Rules:**

State-wide rules

**No. Producing Wells:** 7

**Type of Trap:** Structural

**Productive Formations:** Sawtooth (Jurassic); Madison (Mississippian); Jefferson (Devonian)

**Probable Drive Mechanism:** Unknown

## WHITLASH

**County:** Toole and Liberty

**Discovery Well:**

**Name:** Montana-Canadian Oil, E. Brown No. 1

**Location:** SE NE NW Sec. 19, T. 37N., R. 4E.

**Date Completed:** November, 1918

**Total Depth:** 2730'

**Initial Potential:** 15,000 MCFGPD

**Deepest Well:** Union Oil, Mahoney No. 1. Sec. 22, T. 37N., R. 4E. Cambrian. T.D. 4068'

**Spacing Regulations:**

330' from quarter-quarter section line, 650' between wells, 75' tolerance for topographic reasons. Field delineated by Order No. 16-54

**Special Field Rules:**

State-wide rules

**No. Producing Wells:** 42 Gas; 30 Oil

**Type of Trap:** Combination stratigraphic and structural

**Productive Formations:** Blackleaf, Bow Island, and Kootenai-Sunburst (Cretaceous); Swift-Sawtooth (Jurassic); Madison (Mississippian)

**Probable Drive Mechanism:** Volumetric

## WHITLASH — WEST

**County:** Toole

**Discovery Well:**

**Name:** Sumatra Oil, Parsell 1

**Location:** SE SE NE Sec. 14, T. 37N., R. 23E.

**Date Completed:** August 7, 1962

**Total Depth:** 2880'

**Initial Potential:** 32 MMCFGPD

**Spacing Regulations:**

160-acre gas well spacing. Well to be located no closer than 660' from boundary of spacing unit. Field delineated by Order No. 61-62

**Special Field Rules:**

State-wide rules

**No. Producing Wells:** 3

**Type of Trap:** Unknown

**Productive Formations:** Swift (Jurassic)

**Probable Drive Mechanism:** Volumetric

## WOODROW

**County:** Dawson

**Discovery Well:**

**Name:** Texaco, NP "G" (NCT-8) No. 1

**Location:** NE NE Sec. 7, T. 16N., R. 54E.

**Date Completed:** August 25, 1952

**Total Depth:** 8124'

**Initial Potential:** 114 BOPD, 20% water

**Deepest Well:** Texaco, Elpel No. 1. Winnipeg (Ordovician). T.D. 10,370'

**Spacing Regulations:**

80-acre spacing, permitted well in the NE and SW of each quarter section. Field delineated by Order No. 47-62

**No. Producing Wells:** 6

**Type of Trap:** Structural

**Productive Formations:** Charles (Mississippian), Nisku (Devonian), Silurian, Red River (Ordovician)

**Probable Drive Mechanism:** Water drive

## WOLF SPRINGS

**County:** Yellowstone

**Discovery Well:**

**Name:** Atlantic, C. S. Horton No. 18-1

**Location:** SE SW Sec. 18, T. 7N., R. 32E.

**Date Completed:** July 31, 1955

**Total Depth:** 8442'

**Initial Potential:** 370 BOPD

**Deepest Well:** Above well. Cambrian

**Spacing Regulations:**

80-acre spacing, permitted wells in the NW $\frac{1}{4}$  and SE $\frac{1}{4}$ , 75' tolerance for topographic reasons. Delineated by Order No. 9-59

**Special Field Rules:**

State-wide rules

**No. Producing Wells:** 18

**Type of Trap:** Structural

**Productive Formations:** Amsden (Pennsylvanian)

**Probable Drive Mechanism:** Water drive

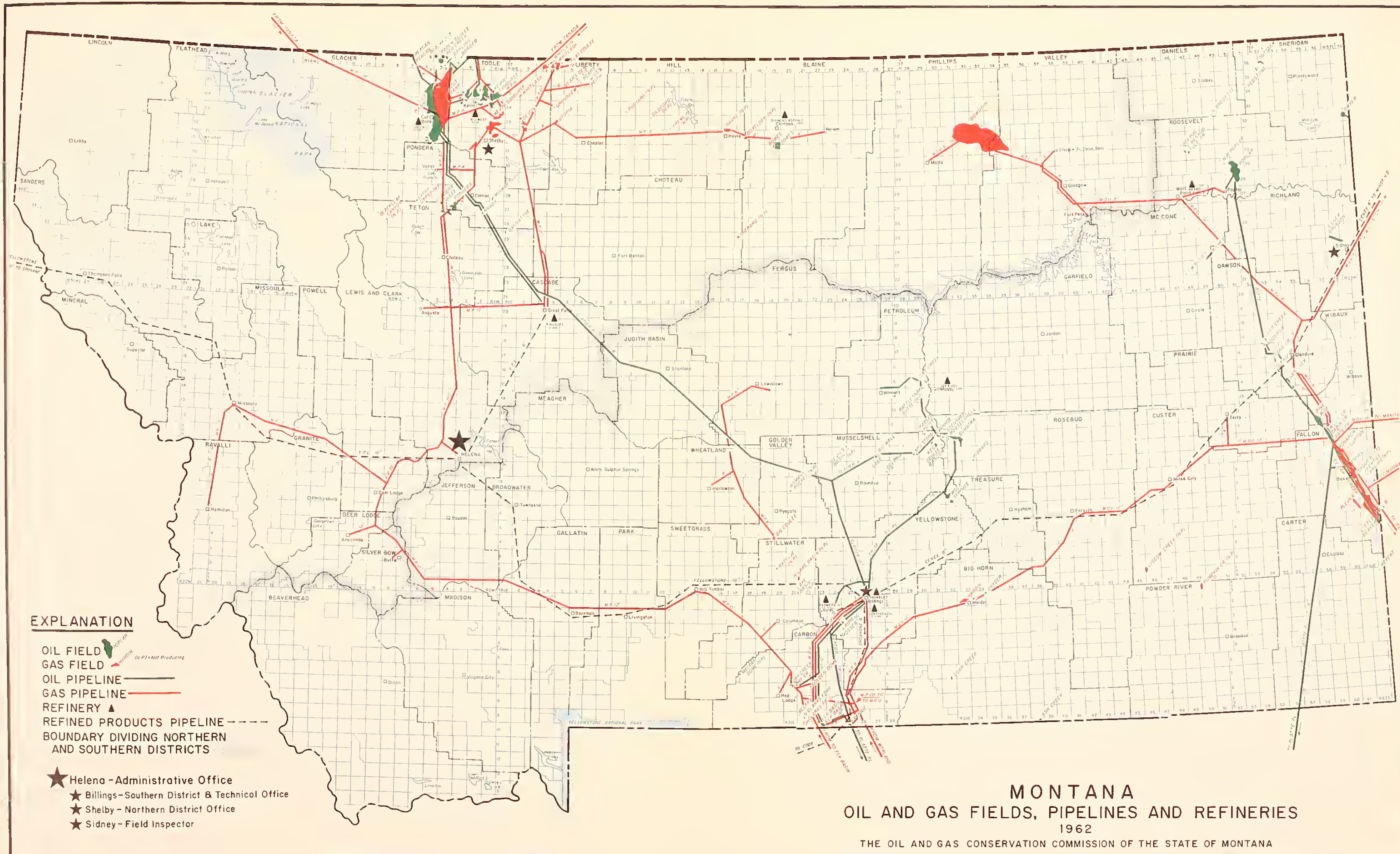


STATE OF MONTANA — SUMMARY OF PRODUCING OIL FIELDS

LINE NO.	FIELD (OR POOL)	COUNTY	YEAR DISCOVERED	PRODUCTION FORMATION	APPROX. DEPTH	A.P.I. GRAVITY	VOLUME FACTOR	AVG.	AVG.	AVG.	ORIGINAL	PRODUCTIVE	ORIGINAL	ESTIMATED RECOVERY FACTOR		ORIGINAL	ORIGINAL	TOTAL	CUMULATIVE	REMAINING	1962 PRODUCTION		ORIGINAL RECOVERABLE RESERVES		LINE NO.		
								NET PAY FT.	POROSITY %	CONNATE WATER %	OIL IN PLACE BBL/ACRE	AREA 1-1-63 ACRES	OIL IN PLACE 1000 BBL.	PRIMARY %	SECONDARY	PRIMARY RESERVES 1000 BBL.	SECONDARY RESERVES 1000 BBL.	ORIGINAL RESERVES 1000 BBL.	1-1-63 1000 BBL.	1-1-63 1000 BBL.	TOTAL BBL.	DAILY BOFD.	BBL./ACRE	BBL./FT.			
1	Ash Creek	Big Horn	1952	Shannon (U. Cret.)	4500	34	1.05	14	22	35	14,855	160	2,377	26	--	618	--	618	366	252	26,695	73	3,865	276	1		
2	Bannatyne	Teton	1927	Swift (U. Jur.)	1450	27	1.05	39	15	43	24,635	170	4,188	5	--	209	--	209	147	62	15,151	42	1,230	32	2		
3	Bascom	Rosebud	1962	Tyler (Penn.)	4850	36	1.10	8	14	25	5,924	40	237	20	--	47	--	47	15	32	14,873	125	1,185	148	3		
4	Bears Den	Liberty	1924	Sunburst (L. Cret.)	2300	39	1.08	20	12	35	11,205	200	2,241	15	--	336	--	336	192	144	41,716	114	1,680	84	4		
5	Benrud	Roosevelt	1951	Nisku (Dev.)	7650	43	1.41	22	16	30	13,557	80	1,085	15	--	163	--	163	34	129	29,908	82	2,037	93	5		
6	Benrud-East	Roosevelt	1952	Nisku (Dev.)	7500	46	1.41	35	15	25	21,665	160	3,466	20	--	693	--	693	16	677	16,145	897	4,331	124	6		
7	Big Wall	Musselshell	1948	Tyler (Penn.)	3000	31	1.02	22	17	40	17,066	1,220	20,821	30	--	6,246	--	6,246	4,429	2,849	363,207	995	5,120	233	7		
8	Big Wall	Musselshell	1953	Amsden (Penn.)	2500	19	1.61	17	16	35	13,647	280	3,821	27	--	1,032	--	1,032	4	4	3,685	217	3,685	217	8		
9	Blackfoot	Glacier	1955	Madison (Miss.)	3550	25	1.15	8	14	40	4,533	480	2,176	25	--	544	--	544	620	333	104,557	286	906	113	9		
10	Blackfoot	Glacier	1955	Cut Bank (L. Cret.)	3500	30	1.11	15	15	35	10,221	160	1,635	25	--	409	--	409	620	333	2,555	170	2,555	170	10		
11	Border	Toole	1929	Cut Bank (L. Cret.)	2400	31	1.08	22	15	30	16,593	340	5,641	23	--	1,297	--	1,297	1,103	194	6,115	17	3,816	173	11		
12	Bowes	Blaine	1949	Sawtooth (H. Jur.)	3250	19	1.02	37	11.7	31	22,719	5,282	120,000	5.75	9.92	6,900	5,000	11,900	6,065	5,835	188,318	516	1,306	35	12		
13	Brady	Pondera	1942	Sunburst (L. Cret.)	1500	34	1.01	10	12	30	6,466	120	776	8	--	62	--	62	16	46	1,728	5	516	52	13		
14	Bredette-North	Roosevelt, Daniels	1956	Charles (Miss.)	6720	38	1.24	24	6	53	4,234	640	2,170	20	--	542	--	542	482	60	7,383	20	847	35	14		
15	Cabin Creek	Fallon	1953	Siluro-Ordovician	8400	33	1.20	50	13	30	29,415	7,620	224,142	18	26	40,346	19,000	59,346	25,363	33,983	3,394,462	9,300	5,294	106	15		
16	Cabin Creek	Fallon	1956	Mission Canyon (Miss.)	7300	33	1.13	25	11	30	13,215	2,259	29,832	18	--	5,373	--	5,373	3,502	1,871	459,183	1,258	2,378	95	16		
17	Cat Creek (Antelope-Mosby)	Petroleum, Garfield	1920	Kootenai (L. Cret.)	1225	52	1.10	10	21	19	11,997	200	2,399	22	--	528	--	528	2	2	2,640	264	2,640	264	17		
18	Cat Creek (West Dome)	Petroleum, Garfield	1920	Kootenai (L. Cret.)	1100	52	1.10	51	21	19	61,186	920	56,291	30	35	16,887	3,000	25,656	20,029	5,627	220,182	603	18,351	360	18		
19	Cat Creek	Petroleum, Garfield	1945	Morrison (U. Jur.)	1600	52	1.10	6	22	40	5,586	120	670	32	--	214	--	214	2	2	1,783	297	1,783	297	19		
20	Cat Creek	Petroleum, Garfield	1945	Swift (U. Jur.)	1750	52	1.10	25	18	40	19,043	880	16,758	30	--	5,027	--	5,027	2	2	5,713	229	5,713	229	20		
21	Cut Bank	Glacier, Toole	1932	Kootenai (L. Cret.)	2900	38	1.15	16	15	35	10,542	54,250	571,903	19	23	108,661	26,500	142,645	95,235	47,410	1,912,278	5,239	2,003	125	21		
22	Cut Bank	Glacier, Toole	1945	Madison (Miss.)	3000	39	1.10	10	14	30	6,912	4,010	27,717	27	--	7,484	--	7,484	745	898	179,947	493	1,866	187	22		
23	Oer Creek	Oawson	1952	Interlake (Sil.)	9440	42	1.22	71	7	35	20,543	400	6,431	20	--	1,643	--	1,643	745	898	179,947	493	1,866	187	23		
24	Ory Creek	Carbon	1930	Greybull (L. Cret.)	5600	52	1.60	12	12	22	5,445	1,700	9,257	20	--	1,851	--	1,851	3,951	1,391	13,790	38	1,089	91	24		
25	Ory Creek	Carbon	1932	Pryor (L. Cret.)	5800	52	1.20	30	12	25	17,455	1,000	17,455	20	--	3,491	--	3,491	3,951	1,391	13,790	38	1,089	91	25		
26	Owyer	Sheridan	1950	Mission Canyon (Miss.)	8000	33	1.12	30	11.8	55	11,033	4,800	52,958	15	--	7,943	--	7,943	1,471	6,472	935,842	2,564	1,654	55	26		
27	Elk Basin	Carbon	1915	Frontier (U. Cret.)	1200	45	1.16	30	21	20	33,702	120	4,044	--	54	--	2,184	--	2,184	39,663	67,696	3,641,910	9,977	36,333	162	27	
28	Elk Basin	Carbon	1942	Embar-Tensleep (Perm.-Penn.)	5000	29	1.16	124	10.5	10	78,598	1,376	108,144	--	57	--	61,642	--	61,642	107,359	39,663	67,696	3,641,910	9,977	36,333	162	28
29	Elk Basin	Carbon	1946	Madison (Miss.)	5300	28	1.12	224	12	9	168,975	920	155,474	21.5	28	33,427	10,106	107,359	39,663	67,696	3,641,910	9,977	36,333	162	29		
30	Elk Basin-Northwest	Carbon	1947	Frontier (U. Cret.)	3375	47	1.29	23	19	30	22,448	120	2,694	25	38	680	340	1,020	722	298	30,838	84	5,616	200	30		
31	Elk Basin-Northwest	Carbon	1947	Madison (Miss.)	6215	35	1.08	124	11.6	20	83,036	382	31,720	19	--	6,027	--	6,027	901	5,126	20,797	57	15,777	70	31		
32	Flat Coulee	Liberty	1933	Swift (U. Jur.)	2900	39	1.10	10	14	30	6,911	440	3,041	15	--	456	--	456	93	363	56,714	155	1,036	104	32		
33	Gas City	Oawson	1955	Red River (U. Ord.)	8700	38	1.28	25	12	35	11,819	2,854	33,731	20	--	6,746	--	6,746	2,715	4,031	860,820	2,358	2,363	95	33		
34	Glendive	Oawson	1952	Siluro-Ordovician	8700	38	1.25	147	8	35	47,440	1,040	49,338	20	--	9,867	--	9,867	5,764	4,103	458,460	1,256	9,488	65	34		
35	Graben Coulee	Glacier	1961	Sunburst, Cut Bank, Madison	2940	34	1.10	15	12	30	8,886	520	4,620	20	--	924	--	924	25	899	23,881	65	1,776	118	35		
36	Gypsy Basin	Pondera	1958	Madison (Miss.)	3150	--	--	--	--	--	--	160	300	25	--	75	--	75	48	27	19,205	53	469	--	36		
37	Hibbard	Rosebud	1960	Amsden (L. Penn.)	4810	31	1.05	12	15	35	8,644	40	346	30	--	104	--	104	77	27	11,281	31	3,005	250	37		
38	Ivanhoe	Musselshell	1960	Amsden (L. Penn.)	3600	32	1.08	9	17	40	6,594	110	725	35	--	254	--	254	98	98	2,309	265	2,309	265			











## SHOWING PRODUCING HORIZONS — MONTANA OIL AND GAS FIELDS, 1962

